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AGA American Gas Association

1988 Gas Facts

Department of Statistics

gas facts

1987 DATA

■ ENERGY RESERVES ■ NATURAL GAS SUPPLY
■ UNDERGROUND STORAGE
■ DISTRIBUTION AND TRANSMISSION
■ ENERGY CONSUMPTION
■ CUSTOMERS ■ SALES ■ REVENUES
■ PRICES ■ APPLIANCE AND HOUSING DATA
■ FINANCE ■ PERSONNEL DATA

■ GLOSSARY ■ INDEX

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GAS FACTS
1987 DATA

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AMERICAN GAS ASSOCIATION

The American Gas Association assumed its present status as the gas utility industry trade association in 1927, after a merger of two predecessor organizations. It renders assistance to the gas utility industry so that the industry may serve its customers more efficiently. Dependence is placed upon the voluntary cooperation of gas companies and established committees composed of representatives from these companies.

The Association recognizes the need for factual information regarding the gas industry for the use, not only of industry organizations, but also interested outside publics. Its statistical efforts are a vital part of this function, and the publication of Gas Facts is one result of these efforts. The statistical activities of A.G.A. are performed by the Department of Statistics with guidance by the Statistics and Related Economics Committee.

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INTRODUCTION

GENERAL

This publication contains detailed statistics for 1987 and summary statistics for 1965–1986 for the gas utility industry which by definition, consists of the companies engaged in natural gas distribution and transmission. The publication also contains relevant data on the gas producing segment of the industry and key statistics on other energy industries.

Production data of the gas industry, and pertinent other energy industry data, are also included. Gas volumes are expressed in millions of cubic feet (at 14.73 psia and 60°F unless otherwise noted) and in British thermal units (Btu) to permit direct comparison with other energy data. A conversion table is included as Appendix B.

Appendix C contains a sample listing of gas utility companies according to their classification as distribution, transmission, integrated, or in some cases, combination companies. These classifications are defined in the glossary, Appendix A. Appendix D contains consumption data gathered by the Gas Requirements Committee. Throughout the publication totals may not add due to independent rounding.

The user should be aware that there has developed a sizeable transportation market which directly affects gas utility sales quantities. Although total pipeline throughput may remain the same, as transportation volumes to end-users increase, gas utility sales quantities to end-users will decrease.

Data presented in *Gas Facts,* broken down by company type, are not necessarily comparable from year to year. Acquisitions, mergers and corporate reorganizations continue to cause the number of companies in any given category to vary from year to year. Some of these changes are sizeable and can cause a dramatic shift in the data reported for a specific category from year to year.

SOURCES OF INFORMATION

Most of the information contained in this volume is developed from data contained in the Uniform Statistical Report, a detailed information form prepared annually by both electric and gas utility companies. Information is also derived from reports filed with regulatory commissions, from financial publications, and from statistical reports prepared by government and private agencies. For 1987, the gas utility companies participating in the Uniform Statistical Report survey represented 97 percent of total gas utility industry sales. Data for non-reporting companies, whose sales represent the remaining 3 percent, were estimated based on recent historical experience.

Employee accident data were taken from the A.G.A. *Disabling Injury Experience of the Gas Utility Industry* report and the National Safety Council *Accident Facts.* Estimates of proved reserves of natural gas, natural gas liquids and petroleum were taken from the U.S. Department of Energy report *U.S.*

Crude Oil, Natural Gas and Natural Gas Liquids Reserves, 1987 annual report. Since this time series only begins in 1977, A.G.A., API and CPA data on natural gas reserves, 1960–1979, are presented. Statistics on underground storage operations were developed by the A.G.A. Committee on Underground Storage. Data for gas spaceheating customers were taken from the A.G.A. *Gas Househeating Survey.* Data on new security issues, as well as related cost and yield data, were derived from various financial publications, supplemented by data provided in the Uniform Statistical Report.

ACKNOWLEDGEMENTS

Our thanks go to those companies participating in the Uniform Statistical Report information gathering effort. Their cooperation and support are the essential elements which have made this publication a primary source of gas utility industry data, and an important industry reference. The cooperation of the public and governmental agencies credited in tables is also greatly appreciated.

Credit also goes to Manager, Statistical Services Ellen Hahn, Project Statisticians Carole Williams-Hopkins and Vanessa Chu, and Supply and Statistics Secretary Jean Twyman. Also contributing to the effort were the A.G.A. Computer Services and Publications/Graphic Services Departments; Bob Kalisch—Director, Gas Supply and Statistics; and Patrick Curley—Associate Director, Statistical Services.

SECTION 1
1987 IN REVIEW

While natural gas supplies continued to exceed demand in 1987, the size of the deliverability surplus declined. Gas drilling remained tepid, with lower 48 states reserve additions equal to 69 percent of production. The depressed level of gas well drilling in 1987 was a result of an excess gas production capability, the "bubble", and low spot prices.

Lower-48 state reserves additions were 10.8 Tcf in 1987 and total U.S. reserves declined less than 2.2 percent to 187 Tcf. Even so, reserves additions for the lower-48 states have averaged 89 percent of production from 1980-1987.

Distribution and transmission facilities increased in 1987 to 1,151.2 thousand miles of distribution main and pipeline, while storage capacity is just over 7.8 Tcf. Thus the gas utility industry's deliverability capacity continues to be matched to the steadily expanding number of gas customers. Average gas utility customers increased in 1987 to 51,575,600.

Gas utility industry sales declined 5.2% in 1987 to 10,543.2 trillion Btu. Residential sales increased 0.1% while commercial and industrial sales declined 3.7% and 11.3%, respectively, from 1986 levels.

Natural gas prices declined 6.2% in 1987 reflecting the continued impact of competitive market pricing for natural gas.

GAS FACTS

TABLE 1-1
COMPARISON OF GAS UTILITY INDUSTRY CUSTOMERS, SALES, REVENUES AND PRICES BY CLASS OF SERVICE, 1986 AND 1987

	1986	1987	Percentage Change
CUSTOMERS—TOTAL[a]	**50,704,300**	**51,575,600**	+ **1.7**
Residential	46,583,200	47,362,400	+ 1.7
Commercial	3,891,500	3,979,600	+ 2.3
Industrial	177,600	180,000	+ 1.4
Other	52,000	53,600	+ 3.1
SALES—TOTAL[b]	**11,125,100**	**10,543,200**	- - **5.2**
Residential	4,380,800	4,384,800	+ 0.1
Commercial	2,238,900	2,155,800	- 3.7
Industrial	4,338,200	3,847,900	-11.3
Other	167,200	154,700	- 7.5
REVENUES—TOTAL[c]	**$51,200,810**	**$45,491,924**	-**11.2**
Residential	24,759,281	23,621,876	- 4.6
Commercial	11,273,843	10,271,326	- 8.9
Industrial	14,494,725	11,069,055	-23.6
Other	672,961	529,667	-21.3
PRICES—TOTAL[d]	**$4.60**	**$4.31**	- **6.2**
Residential	5.65	5.39	- 4.7
Commercial	5.04	4.76	- 5.4
Industrial	3.34	2.88	-13.9
Other	4.02	3.42	-14.9

[a] Yearly averages

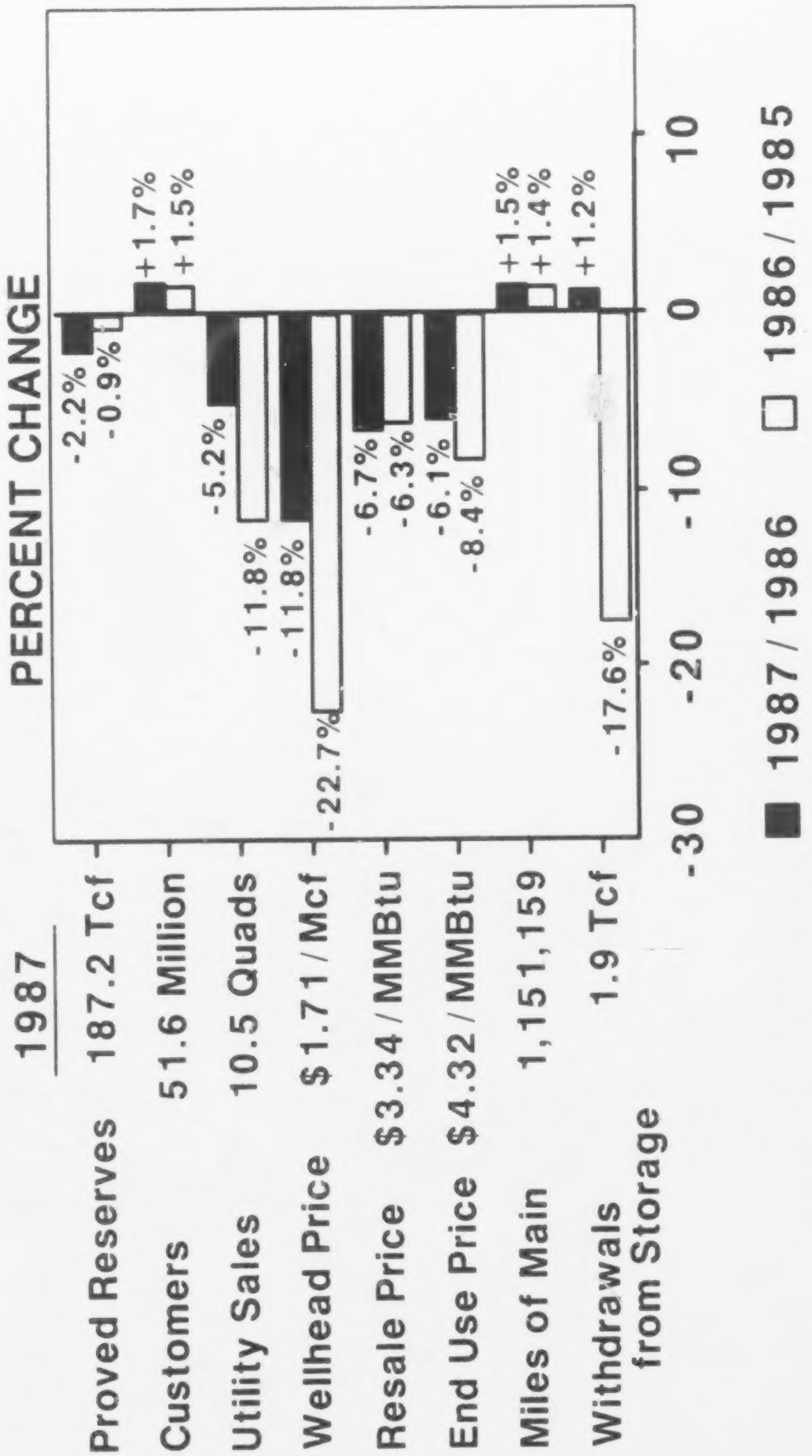
[b] Sales quantities in billions of Btu

[c] Revenues in thousands of dollars

[d] Prices in dollars per million Btu

CHART 1-1

SELECTED GAS INDUSTRY HIGHLIGHTS OF 1987



SECTION 2
ENERGY RESERVES

Prior to 1980, data on reserves of oil, natural gas and gas liquids were taken from *Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada,* an annual report published jointly by A.G.A., the American Petroleum Institute (API) and the Canadian Petroleum Association (CPA). The publication of this report was discontinued after the year-end 1979 report was released in June, 1980. Since 1977, however, the Energy Information Administration (EIA) within the Department of Energy has published an annual reserves report. Data listed below and in several of the tables in this section were taken from the EIA series. For years prior to 1980 A.G.A./API/CPA data is also listed for natural gas reserves.

	Reserves as of December 31	
	1987	% Change 87/86
Natural Gas		
(Billions of cubic feet)		
Total	187,211	− 2.3
% of Non-Associated, estimated	70.4	
% of Associated-Dissolved, estimated	29.6	
Underground Storage*	5,161	− 1.0
Gross Additions	11,739	− 15.1
Production	16,114	+ 3.2
Natural Gas Liquids		
(Millions of barrels)		
Total	8,147	− 0.2
Gross Additions	729	− 24.0
Production	747	+ 1.2
Crude Oil		
(Millions of barrels)		
Total	27,256	+ 1.4
Gross Additions	3,240	+ 124.1
Production	2,873	− 3.4

*Not included in Total Reserves. Data taken from "The Underground Storage of Gas in the United States and Canada."

TABLE 2-1

SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF NATURAL GAS IN THE UNITED STATES, 1960–1979[a]

(Millions of Cubic Feet)

	Changes in Reserves during year										
Year	Extensions	Extensions and Revisions	Revisions	New Field Discoveries	Discoveries of New Fields and New Pools in Old Fields	New Reservoir Discoveries	Total of Discoveries, Revisions and Extensions	Net Change in Underground Storage	Preliminary Net Production during Year[c]	Estimated Proved Reserves as of End of Year	Change over Previous Year
1960	—	7,293,015	—	—	6,600,963	—	13,893,978	281,273	13,019,356	262,326,326	1,155,895
1961	—	10,258,692	—	—	6,907,729	—	17,166,421	159,544	13,378,649	266,273,642	3,947,316
1962	—	13,184,794	—	—	6,299,164	—	19,483,958	159,231	13,637,973	272,278,858	6,005,216
1963	—	12,586,733	—	—	5,577,934	—	18,164,667	253,733	14,546,025	276,151,233	3,872,375
1964	—	13,342,838	—	—	6,909,301	—	20,252,139	195,110	15,347,028	281,251,454	5,100,221
1965	—	14,775,570	—	—	6,543,709	—	21,319,279	150,483	16,252,293	286,468,923	5,217,469
1966	9,224,745	—	4,937,962	2,947,329	—	3,110,396	20,220,432	134,523	17,491,073	289,332,805	2,863,882
1967	9,538,584	—	6,570,578	3,170,520	—	2,524,651	21,804,333	151,403	18,380,838	292,907,703	3,574,898
1968	7,758,821	—	3,016,146	1,376,429	—	1,545,612	13,697,008	118,569	19,373,428	287,349,852	(5,557,851)
1969	5,800,489	—	(1,238,261)	1,769,557	—	2,043,219	8,375,004	107,169	20,723,190	275,108,835	(12,241,017)
1970	6,158,168	—	(99,721)	27,770,223[b]	—	3,367,689	37,196,359	402,018	21,960,804	290,746,408	15,637,573
1971	6,374,706	—	(1,227,400)	1,317,574	—	3,360,541	9,825,421	310,301	22,076,512	278,805,618	(11,940,790)
1972	6,153,683	—	(1,077,791)	1,462,539	—	3,096,132	9,634,563	156,563	22,511,898	266,084,846	(12,720,772)
1973	6,177,286	—	(3,474,756)	2,152,151	—	1,970,368	6,825,049	(354,282)	22,605,406	249,950,207	(16,134,639)
1974	5,847,251	—	(1,333,285)	2,013,745	—	2,151,473	8,679,184	(178,424)	21,318,470	237,132,497	(12,817,410)
1975	6,027,433	—	383,449	2,423,382	—	1,649,424	10,483,688	302,561	19,718,570	228,200,176	(8,932,321)
1976	5,337,707	—	(1,197,119)	1,421,013	—	1,993,867	7,555,468	(187,550)	19,542,020	216,026,074	(12,174,102)
1977	6,601,229	—	983,551	2,114,505	—	2,152,639	11,851,924	446,930	19,447,050	208,877,878	(7,148,196)
1978	6,733,441	—	118,436	1,719,938	—	2,014,329	10,586,144	148,733	19,311,048	200,301,707	(8,576,171)
1979	7,113,113	—	2,907,551	2,575,779	—	1,689,504	14,285,947	239,323	19,910,353	194,916,624	(5,385,083)

a. Volumes are calculated at a pressure base of 14.73 psi, absolute, and at a standard temperature of 60°F.

b. Includes the estimates of proved reserves in the Prudhoe Bay Permo-triassic reservoir discovered in 1968 and not previously included.

c. "Preliminary Net Production" equals estimated gross withdrawals less (1) gas reinjected into producing reservoirs for cycling and pressure maintenance, and (2) natural gas liquids. "Preliminary Net Production" differs from U.S. Bureau of Mines "Marketed Production" in that (1) the sources from which they are derived are different, and (2) "Marketed Production" includes natural gas liquids.

( ): Denotes negative value.

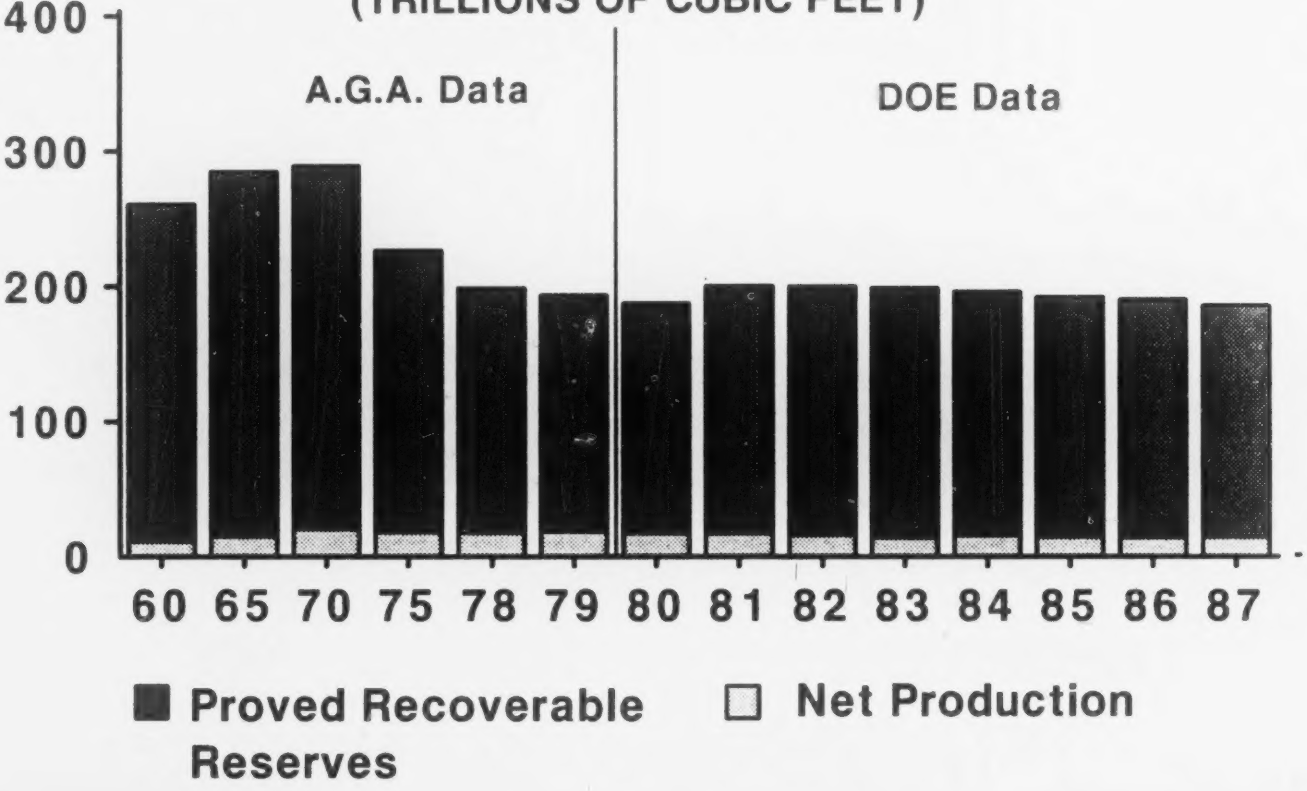
Source: A.G.A., American Petroleum Institute and Canadian Petroleum Association. *Reserves of Crude Oil, Natural Gas in the United States and Canada as of December 31, 1979.*

Note: Publication of the above mentioned source ceased with the December 31, 1979 edition. See Table 2-2 for EIA information covering 1976-1987.

CHART 2-1

PROVED RECOVERABLE RESERVES & NET PRODUCTION OF NATURAL GAS IN THE UNITED STATES

(TRILLIONS OF CUBIC FEET)



REFERENCE: TABLES 2-1, 2-2

TABLE 2-2
SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF NATURAL GAS IN THE UNITED STATES, 1976–1987

(Billions of Cubic Feet)

	Changes in Reserves During Year									
Year	Net of Corrections and Adjustments (1)	Revision Increases (2)	Revision Decreases (3)	Extensions to Old Reservoirs (4)	New Reservoir Discoveries in Old Fields (5)	New Field Discoveries (6)	Total Discoveries[a] (7)	Production Dry (8)	Proved Reserves[b] 12/31 (9)	Net Change From Prior Year (10)
1976	—	—	—	—	—	—	—	—	213,278[c]	—
1977	(20)[d]	13,691	15,296	8,129	3,301	3,173	14,603	18,843	207,413	(5,865)
1978	2,429	14,969	15,994	9,582	4,579	3,860	18,021	18,805	208,033	620
1979	(2,264)	16,410	16,629	8,950	2,566	3,188	14,704	19,257	200,997	(7,036)
1980	1,201	16,972	15,923	9,357	2,577	2,539	14,473	18,699	199,021	(1,976)
1981	1,627	16,412	13,813	10,491	2,998	3,731	17,220	18,737	201,730	2,709
1982	2,378	19,795	19,340	8,349	3,419	2,687	14,455	17,506	201,512	(218)
1983	3,090	17,602	17,617	6,909	2,965	1,574	11,448	15,788	200,247	(1,265)
1984	(2,241)	17,841	14,712	8,299	2,686	2,536	13,521	17,193	197,463	(2,784)
1985	(1,708)	18,775	16,304	7,169	2,960	999	11,128	15,985	193,369	(4,094)
1986	1,320	21,269	17,697	6,065	1,771	1,099	8,935	15,610	191,586	(1,783)
1987	1,268	17,527	14,231	4,587	1,499	1,089	7,175	16,114	187,211	(4,375)

a. Col. 4 + Col. 5 + Col. 6 = Col. 7.

b. Proved reserves = Prior year Col. 9 + Col. 1 + Col. 2 − Col. 3 + Col. 7 − Col. 8.

c. Based on following year data only.

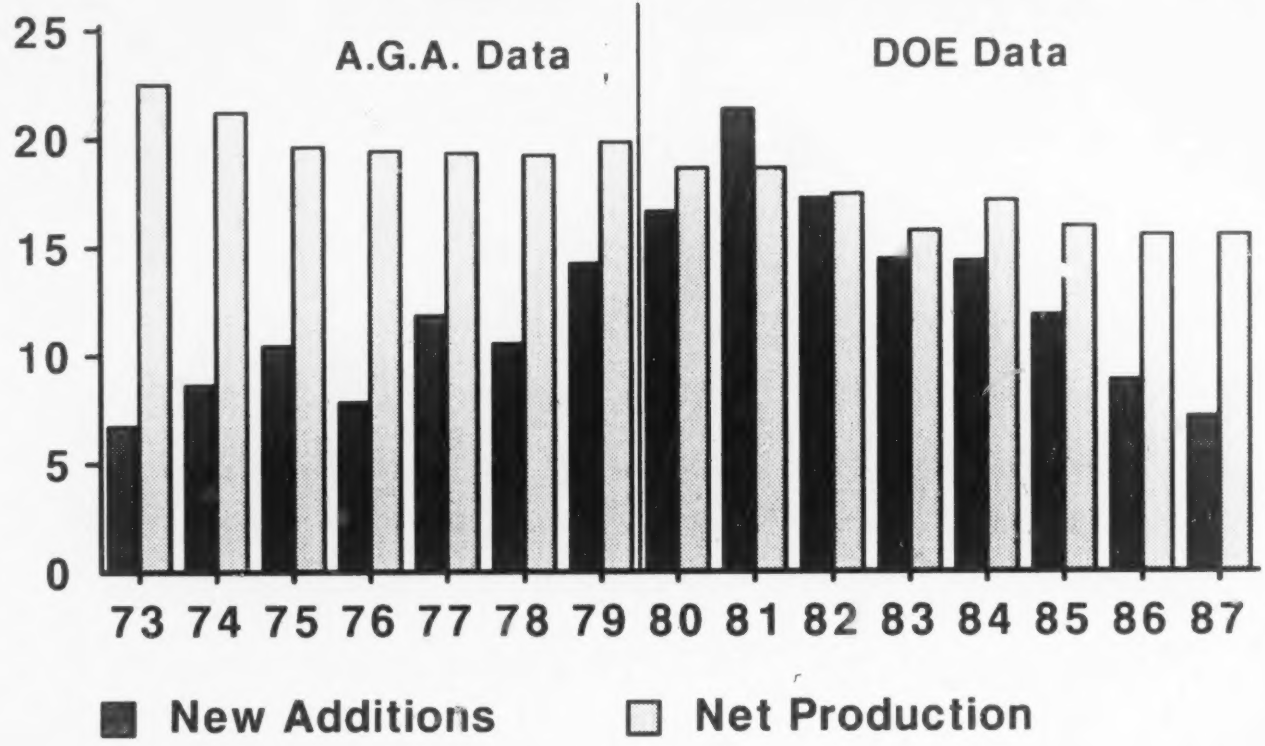
d. Consists only of reported corrections.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves,* 1987 Annual Report.

CHART 2-2

NET PRODUCTION AND NEW ADDITIONS TO GAS RESERVES (TRILLIONS OF CUBIC FEET)



REFERENCE: TABLES 2-1, 2-2

TABLE 2-3
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS, IN THE UNITED STATES BY STATE, DURING 1987[a]

(Billions of Cubic Feet)

		Changes in Reserves During 1987		
State and Subdivision	Published Proved Reserves 12/31/86	Net of Corrections and Adjustments	Revision Increases	Revision Decreases
(1) Total United States	**191,586**	**1,268**	**17,527**	**14,231**
(2) Alabama Onshore	951	(154)	161	57
(3) Alaska	32,664	202	718	67
(4) Arkansas	1,992	26	215	229
(5) California	3,928	(69)	315	136
(6) Coastal Region Onshore	255	(14)	34	15
(7) Los Angeles Basin Onshore	142	9	21	9
(8) San Joaquin Basin Onshore	3,277	(63)	246	102
(9) State Offshore	254	(1)	14	10
(10) Colorado	3,027	(77)	340	268
(11) Florida	49	7	0	0
(12) Kansas	10,509	239	245	147
(13) Kentucky	841	68	65	17
(14) Louisiana[b]	12,930	156	1,655	1,414
(15) North	2,515	(13)	247	259
(16) South Onshore	9,103	(121)	1,270	1,005
(17) State Offshore[b]	1,312	290	138	150
(18) Michigan	1,139	35	160	157
(19) Mississippi	1,300	5	153	96
(20) Montana	803	(25)	57	16
(21) New Mexico	11,808	(76)	1,123	650
(22) East	2,694	185	524	222
(23) West	9,114	(261)	599	428
(24) New York	457[d]	(11)	3	17
(25) North Dakota	541	(3)	83	64
(26) Ohio	1,420	(260)	45	35
(27) Oklahoma	16,685	559	2,251	2,047
(28) Pennsylvania	1,560	164	109	195
(29) Texas	40,574	438	4,477	4,009
(30) District 1	913	(7)	74	62
(31) District 2 Onshore	2,180	320	300	280
(32) District 3 Onshore	3,753	(5)	518	349
(33) District 4 Onshore	8,274	5	1,127	1,599
(34) District 5	2,141	31	151	112
(35) District 6	4,854	68	366	269
(36) District 7B	684	96	59	58
(37) District 7C	2,721	137	244	192
(38) District 8	7,333	(120)	634	308
(39) District 8A	845	72	72	44
(40) District 9	868	(7)	118	68
(41) District 10	5,276	(129)	742	572
(42) State Offshore	732	(23)	72	96
(43) Utah	1,895	(45)	281	144
(44) Virginia	253	2	5	8
(45) West Virginia	2,148	154	137	134
(46) Wyoming	9,756	38	771	425
(47) Federal Offshore	34,223	(27)	4,154	3,898
(48) Miscellaneous[c]	133	(78)	4	1

a. Volumes are calculated at a pressure base 14.73 psi, absolute, and at a standard temperature of 60°F.

b. Includes offshore Alabama.

c. Includes Arizona, Illinois, Indiana, Maryland, Nebraska, Oregon, South Dakota, and Tennessee.

d. Indicates that the estimate is associated with a sampling error (95 percent confidence interval) which exceeds 20 percent of the estimated value.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1987 Annual Report.

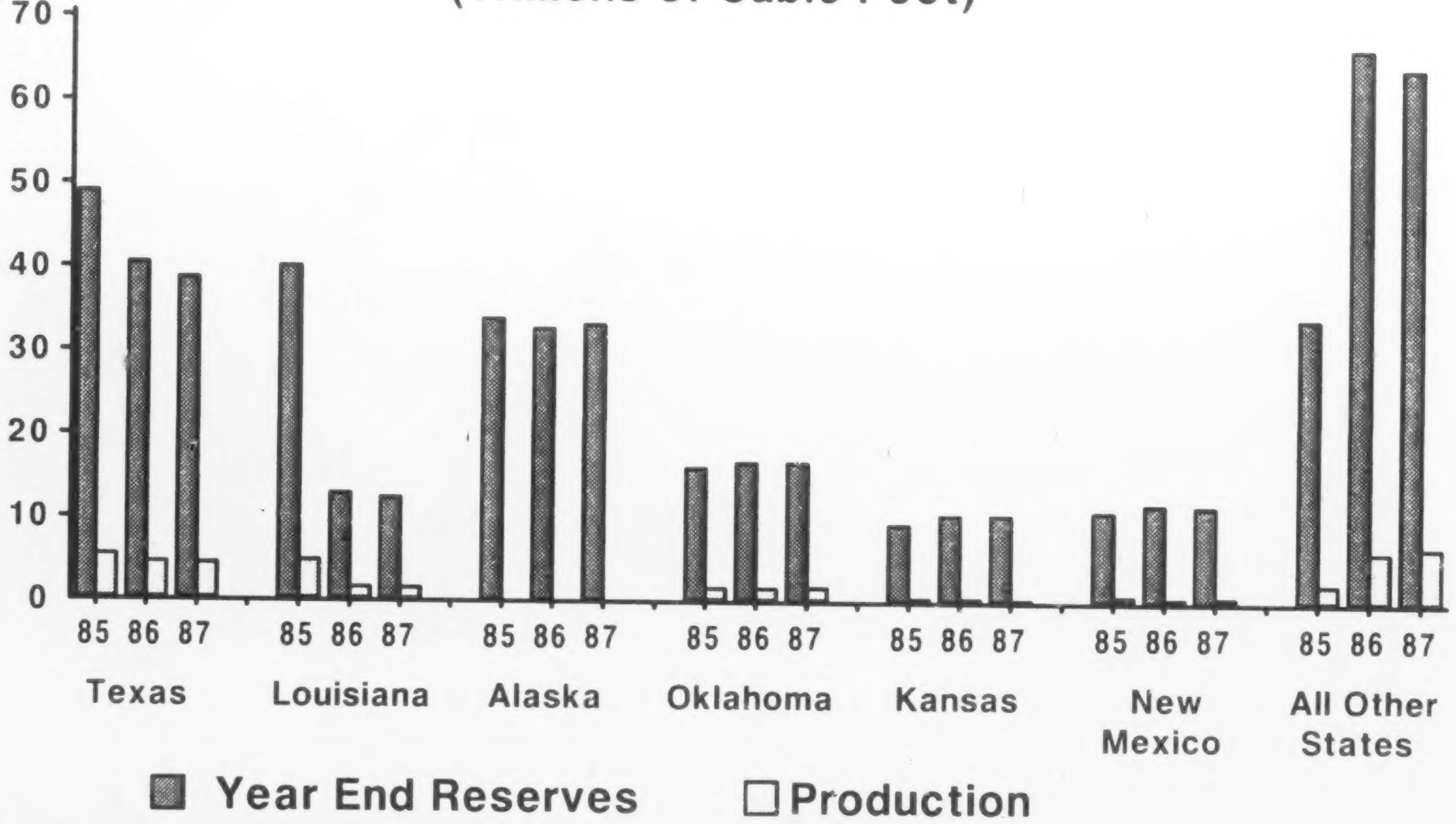
TABLE 2-3 (Continued)
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS, IN THE UNITED STATES BY STATE, DURING 1987

(Billions of Cubic Feet)

Changes in Reserves During 1987					
Extensions	New Field Discoveries	New Reservoir Discoveries In Old Fields	Production	Proved Reserves 12/31/87	
4,587	**1,089**	**1,499**	**16,114**	**187,211**	(1)
39	0	2	100	842	(2)
45	12	0	349	33,225	(3)
93	0	29	129	1,997	(4)
44	1	2	345	3,740	(5)
2	0	0	24	238	(6)
2	0	0	17	148	(7)
33	1	2	292	3,102	(8)
7	0	0	12	252	(9)
71	7	1	159	2,942	(10)
0	0	0	7	49	(11)
76	8	1	437	10,494	(12)
10	0	0	58	909	(13)
414	16	298	1,625	12,430	(14)
127	1	4	316	2,306	(15)
272	6	277	1,109	8,693	(16)
15	9	17	200	1,431	(17)
257	90	57	130	1,451	(18)
32	1	3	178	1,220	(19)
2	0	1	42	780	(20)
131	1	11	728	11,620	(21)
71	0	11	382	2,881	(22)
60	1	0	346	8,739	(23)
0	1	0	23[d]	410	(24)
5	2	1	57	508	(25)
12	0	4	117	1,069	(26)
823	11	242	1,813	16,711	(27)
137	0	0	128	1,647	(28)
1,326	177	245	4,517	38,711	(29)
9	1	14	130	812	(30)
58	20	24	349	2,273	(31)
146	119	19	569	3,632	(32)
701	11	129	1,158	7,490	(33)
79	0	0	171	2,119	(34)
47	5	6	395	4,682	(35)
16	0	6	106	697	(36)
22	5	13	242	2,708	(37)
62	7	24	633	6,999	(38)
2	0	0	71	876	(39)
35	0	0	112	834	(40)
108	4	4	471	4,962	(41)
41	5	6	110	627	(42)
12	5	3	60	1,947	(43)
15	0	0	19	248	(44)
92	0	13	168	2,242	(45)
318	5	16	456	10,023	(46)
632	752	557	4,462	31,931	(47)
1	0	13	7	65	(48)

CHART 2-3

NATURAL GAS STATE RESERVES FOR 1985,1986, & 1987
(Trillions of Cubic Feet)



REFERENCE: TABLE 2-3

TABLE 2-4
SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF NATURAL GAS LIQUIDS IN THE UNITED STATES, 1978–1987

(Millions of Barrels)[a]

Year	Net of Corrections and Adjustments (1)	Revision Increases (2)	Revision Decreases (3)	Extensions to Old Reservoirs (4)	New Reservoir Discoveries in Old Fields (5)	New Field Discoveries (6)	Total Discoveries[b] (7)	Production (8)	Proved Reserves[c] 12/31 (9)	Net Change From Prior Year (10)
1978	—	—	—	—	—	—	—	—	6,772[d]	—
1979	64[e]	677	726	364	97	94	555	727	6,615	(157)
1980	153	743	639	418	79	90	587	731	6,728	113
1981	231	729	643	542	91	131	764	741	7,068	340
1982	299	811	832	375	109	112	596	721	7,221	153
1983	849	847	781	321	99	70	490	725	7,901	680
1984	(123)	866	724	348	96	55	499	776	7,643	(258)
1985	426	906	744	337	85	44	466	753	7,944	301
1986	367	1,030	807	263	72	34	369	738	8,165	221
1987	231	847	656	213	55	39	307	747	8,147	(18)

a. Barrel = 42 U.S. gallons.
b. Col. 4 + Col. 5 + Col. 6 = Col. 7.
c. Proved Reserves = Prior year Col. 9 + Col. 1 + Col. 2 − Col. 3 + Col. 7 − Col. 8.
d. Based on following year data only.
e. Consists only of reported corrections.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas and Natural Gas Liquids Reserves*, 1987 Annual Report.

TABLE 2-5
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS LIQUIDS, IN THE UNITED STATES BY STATE, DURING 1987

(Millions of Barrels)[a]

		Changes In Reserves During 1987		
State and Subdivision	Published Proved Reserves 12/31/86	Net of Corrections and Adjustments	Revision Increases	Revision Decreases
(1) Total United States	**8,165**	**231**	**847**	**656**
(2) Alabama	177	(9)	17	8
(3) Alaska	381	52	1	1
(4) Arkansas	16	0	2	2
(5) California	134	0	11	4
(6) Coastal Region Onshore	15	(2)	2	1
(7) Los Angeles Basin Onshore	8	0	1	0
(8) San Joaquin Basin Onshore	109	2	8	3
(9) State Offshore	2	0	0	0
(10) Colorado	148	22	17	15
(11) Florida	14	(4)	0	0
(12) Kansas	440	33	11	6
(13) Kentucky	29	(7)	2	0
(14) Louisiana	524	33	67	58
(15) North	57	(4)	8	6
(16) South Onshore	428	24	54	48
(17) State Offshore	39	13	5	4
(18) Michigan	88	(4)	13	11
(19) Mississippi	11	1	1	1
(20) Montana	16	0	1	0
(21) New Mexico	577	202	77	47
(22) East	217	(24)	35	17
(23) West	360	226	42	30
(24) North Dakota	69	4	9	9
(25) Oklahoma	857	(46)	109	103
(26) Texas	2,964	(22)	324	251
(27) District 1	35	(4)	3	3
(28) District 2 Onshore	89	21	15	14
(29) District 3 Onshore	237	(8)	36	23
(30) District 4 Onshore	281	20	47	60
(31) District 5	86	5	6	5
(32) District 6	277	(1)	24	17
(33) District 7B	109	(6)	8	8
(34) District 7C	246	12	22	18
(35) District 8	717	(58)	58	28
(36) District 8A	331	(11)	26	15
(37) District 9	119	1	15	10
(38) District 10	428	6	62	49
(39) State Offshore	9	1	2	1
(40) Utah and Wyoming	950	(23)	87	53
(41) West Virginia	87	2	5	5
(42) Federal Offshore	681	(5)	93	82
(43) Miscellaneous[b]	2	2	0	0

a. Barrel = 42 U.S. gallons.

b. Includes Illinois, Indiana, Nebraska, New York, Ohio, Pennsylvania, and Tennessee

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1987 Annual Report

TABLE 2-5 (Continued)
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS LIQUIDS, IN THE UNITED STATES BY STATE, DURING 1987

(Millions of Barrels)[a]

Changes in Reserves During 1987					
Extensions	New Field Discoveries	New Reservoir Discoveries in Old Fields	Production	Proved Reserves 12/31/87	
213	**39**	**55**	**747**	**8,147**	**(1)**
3	0	0	14	166	(2)
1	0	0	16	418	(3)
1	0	0	1	16	(4)
1	0	0	12	130	(5)
0	0	0	1	13	(6)
0	0	0	1	8	(7)
1	0	0	10	107	(8)
0	0	0	0	2	(9)
3	0	0	9	166	(10)
0	0	0	1	9	(11)
3	0	0	19	462	(12)
0	0	0	1	23	(13)
14	0	15	70	525	(14)
3	0	0	8	50	(15)
11	0	15	55	429	(16)
0	0	0	7	46	(17)
22	7	5	9	111	(18)
0	0	0	1	11	(19)
0	0	0	1	16	(20)
9	0	1	48	771	(21)
5	0	1	25	192	(22)
4	0	0	23	579	(23)
1	0	0	7	67	(24)
41	0	10	87	781	(25)
81	15	11	300	2,822	(26)
0	0	0	4	27	(27)
4	1	1	15	102	(28)
21	13	1	36	241	(29)
24	0	5	40	277	(30)
3	0	0	7	88	(31)
3	0	0	22	264	(32)
2	0	1	14	92	(33)
2	0	1	22	243	(34)
6	1	2	58	640	(35)
1	0	0	25	307	(36)
5	0	0	15	115	(37)
10	0	0	40	417	(38)
0	0	0	2	9	(39)
17	1	1	56	924	(40)
4	0	0	6	87	(41)
12	16	12	89	638	(42)
0	0	0	0	4	(43)

TABLE 2-6
TOTAL ESTIMATED REMAINING IDENTIFIED RESERVES OF COAL AND LIGNITE BY STATE, AS OF JANUARY 1, 1987

(Billions of Short Tons)

State	Total Coal and Lignite	Coal			Lignite
		Anthracite and Semianthracite	Subbituminous	Bituminous	
United States	**475.9**	**7.3**	**180.5**	**242.8**	**45.3**
Alabama	5.0	—	—	3.9	1.1
Alaska	6.1	—	5.4	7	a
Arizona	3	—	—	3	—
Arkansas	4	1	—	3	a
Colorado	17.1	a	3.9	9.0	4.2
Georgia	a	—	—	a	—
Idaho	a	—	—	a	—
Illinois	78.6	—	—	78.6	—
Indiana	10.3	—	—	10.3	—
Iowa	2.2	—	—	2.2	—
Kansas	1.0	—	—	1.0	—
Kentucky	30.5	—	—	30.5	—
Louisiana	5	—	—	—	5
Maryland	8	—	—	8	—
Michigan	1	—	—	1	—
Missouri	6.0	—	—	6.0	—
Montana	120.2	—	103.0	1.4	15.8
New Mexico	4.6	a	2.6	2.0	—
North Carolina	a	—	—	a	—
North Dakota	9.8	—	—	—	9.8
Ohio	18.7	—	—	18.7	—
Oklahoma	1.6	—	—	1.6	—
Oregon	a	—	a	—	—
Pennsylvania	29.6	7.1	—	22.5	—
South Dakota	4	—	—	—	4
Tennessee	9	—	—	9	—
Texas	13.6	—	—	—	13.6
Utah	6.3	—	a	6.3	—
Virginia	3.0	1	—	2.8	—
Washington	1.4	—	1.1	3	a
West Virginia	38.2	—	—	38.2	—
Wyoming	68.8	—	64.4	4.4	—

a. Less than 50 million short tons

Source: U.S. Department of Energy, Energy Information Administration, *Coal Production 1986*

TABLE 2-7
SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF CRUDE OIL IN THE UNITED STATES, 1976–1987

(Millions of Barrels)[a]

Year	Net of Corrections and Adjustments (1)	Revision Increases (2)	Revision Decreases (3)	Extensions to Old Reservoirs (4)	New Reservoir Discoveries in Old Fields (5)	New Field Discoveries (6)	Total Discoveries[b] (7)	Production (8)	Proved Reserves[c] 12/31 (9)	Net Change From Prior Year (10)
1976	—	—	—	—	—	—	—	—	33,502[d]	—
1977	(40)[e]	1,503	1,117	496	130	168	794	2,862	31,780	(1,722)
1978	366	2,799	1,409	444	116	267	827	3,008	31,355	(425)
1979	337	2,438	2,001	424	104	108	636	2,955	29,810	(1,545)
1980	219	2,883	994	572	147	143	862	2,975	29,805	(5)
1981	138	2,151	880	750	157	254	1,161	2,949	29,426	(379)
1982	(83)	2,245	1,811	634	193	204	1,031	2,950	27,858	(1,568)
1983	462	2,810	1,299	629	190	105	924	3,020	27,735	(123)
1984	159	3,672	1,227	744	158	242	1,144	3,037	28,446	711
1985	429	3,037	1,439	742	169	84	995	3,052	28,416	(30)
1986	57	2,724	1,869	405	81	48	534	2,973	26,889	(1,527)
1987	233	3,687	1,371	484	111	96	691	2,873	27,256	367

[a] Barrel = 42 U.S. gallons.

[b] Col. 4 + Col. 5 + Col. 6 = Col. 7.

[c] Proved Reserves = Prior year Col. 9 + Col. 1 + Col. 2 − Col. 3 + Col. 7 − Col. 8.

[d] Based on following year data only.

[e] Consists only of reported corrections.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1987 Annual Report.

TABLE 2-8
CHANGES IN ESTIMATED PROVED RESERVES OF CRUDE OIL, IN THE UNITED STATES BY STATE, DURING 1987

(Millions of Barrels)[a]

State and Subdivision	Published Proved Reserves 12/31/86	Changes in Reserves During 1987: Net of Corrections and Adjustments	Changes in Reserves During 1987: Revision Increases	Changes in Reserves During 1987: Revision Decreases
(1) Total United States	**26,889**	**233**	**3,687**	**1,371**
(2) Alabama	55	5	3	5
(3) Alaska	6,875	0	1,121	158
(4) Arkansas	88	2	6	6
(5) California	4,734	(46)	505	151
(6) Coastal Region Onshore	592	8	92	39
(7) Los Angeles Basin Onshore	330	18	53	9
(8) San Joaquin Basin Onshore	3,270	(75)	352	95
(9) State Offshore	542	3	8	8
(10) Colorado	207	(28)	119	9
(11) Florida	67	0	2	0
(12) Illinois	135	33	8	3
(13) Indiana	32[b]	(6)	1	0
(14) Kansas	312	96	24	22
(15) Kentucky	31[b]	(5)	1	0
(16) Louisiana	826	11	187	131
(17) North	160	23	31	20
(18) South Onshore	547	(13)	108	76
(19) State Offshore	119	1	48	35
(20) Michigan	146	7	22	8
(21) Mississippi	199	2	26	8
(22) Montana	248	(19)	44	12
(23) Nebraska	45[b]	(10)	2	2
(24) New Mexico	644	10	90	35
(25) East	593	9	81	24
(26) West	51	1	9	11
(27) North Dakota	218	(1)	45	21
(28) Ohio	72	2	4	3
(29) Oklahoma	874	(48)	138	86
(30) Pennsylvania	26[b]	(4)	4	1
(31) Texas	7,152	123	761	294
(32) District 1	144	11	9	2
(33) District 2 Onshore	148	10	9	6
(34) District 3 Onshore	420	(7)	59	22
(35) District 4 Onshore	87	10	16	20
(36) District 5	53	(2)	10	4
(37) District 6	750	21	59	25
(38) District 7B	193	15	53	40
(39) District 7C	213	18	37	25
(40) District 8	2,183	(30)	189	67
(41) District 8A	2,618	69	288	58
(42) District 9	237	(10)	14	7
(43) District 10	104	8	16	14
(44) State Offshore	2	10	2	4
(45) Utah	269	1	38	7
(46) West Virginia	37	0	3	3
(47) Wyoming	849	20	225	162
(48) Federal Offshore	2,715	89	304	244
(49) Miscellaneous[c]	33	(1)	4	0

[a] Barrel = 42 U.S. gallons.

[b] Indicates that the estimate is associated with a sampling error (95 percent confidence interval) which exceeds 20 percent of the estimated value.

[c] Includes Arizona, Missouri, Nevada, New York, South Dakota, Tennessee, and Virginia.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1987 Annual Report.

TABLE 2-8 (Continued)
CHANGES IN ESTIMATED PROVED RESERVES OF CRUDE OIL, IN THE UNITED STATES BY STATE, DURING 1987

(Millions of Barrels)[a]

Changes in Reserves During 1987					
Extensions	New Field Discoveries	New Reservoir Discoveries in Old Fields	Production	Proved Reserves 12/31/87	
484	**96**	**111**	**2,873**	**27,256**	**(1)**
1	6	1	11	55	(2)
190	58	10	718	7,378	(3)
4	0	0	12	82	(4)
31	0	2	366	4,709	(5)
2	0	0	30	625	(6)
7	0	0	38	361	(7)
22	0	2	268	3,208	(8)
0	0	0	30	515	(9)
7	2	1	27	272	(10)
1	0	0	9	61	(11)
1	0	0	21	153	(12)
0	0	0	4	23	(13)
5	1	1	60	357	(14)
1	0	0	3[b]	25	(15)
37	3	14	140	807	(16)
7	0	1	27	175	(17)
23	3	7	94	505	(18)
7	0	6	19	127	(19)
2	2	1	21	151	(20)
6	2	2	27	202	(21)
6	1	3	25	246	(22)
2	0	1	5	33	(23)
12	1	1	69	654	(24)
10	1	1	63	608	(25)
2	0	0	6	46	(26)
8	2	2	38	215	(27)
1	0	0	10	66	(28)
26	4	3	123	788	(29)
3	0	0	2[b]	26	(30)
76	6	14	726	7,112	(31)
2	0	0	21	143	(32)
1	0	1	26	137	(33)
4	0	2	70	386	(34)
1	0	1	15	80	(35)
8	0	0	11	54	(36)
2	0	0	74	733	(37)
6	2	1	30	200	(38)
6	1	1	31	220	(39)
29	2	5	203	2,108	(40)
10	1	2	195	2,735	(41)
4	0	1	33	206	(42)
3	0	0	15	102	(43)
0	0	0	2	8	(44)
2	1	0	20	284	(45)
0	0	0	3	34	(46)
16	6	3	103	854	(47)
46	1	52	324	2,639	(48)
0	0	0	6	30	(49)

TABLE 2–9
SUMMARY OF ANNUAL ESTIMATES OF RESERVES OF NATURAL GAS IN CANADA, 1965–1987[a]

(Millions of Cubic Feet)

		Changes Due To								
	Reserves Remaining at Beginning of Year	Revisions	Revisions and Extensions	Extensions	Discoveries	Net Change in Underground Storage	Net Production	Reserves Remaining at End of Year	Change During Year	Probable Remaining at End of Year[b]
MARKETABLE GAS[c]										
1965	39,319,544	—	—	—	—	—	—	40,354,527	1,034,983	46,434,950
1970	51,950,995	493,804	—	2,516,126	193,682	20,205	1,799,184	53,375,628	1,424,633	60,289,373
1971	53,375,628	983,556	—	2,280,205	775,500	65	1,953,104	55,461,850	2,086,222	61,964,760
1972	55,461,850	(2,004,125)	—	1,243,897	487,538	(5,580)	2,247,798	52,935,782	(2,526,068)	60,546,769
1973	52,935,782	(167,054)	—	1,257,243	686,714	70,097	2,325,350	52,457,432	(478,350)	60,801,088
1974	52,457,432	2,953,557	—	3,487,099	193,056	10,428	2,393,486	56,708,086	4,250,654	64,459,133
1975	56,708,086	(177,606)	—	2,412,582	362,895	29,869	2,361,110	56,974,716	266,630	71,466,773
1976	56,974,716	(367,880)	—	3,587,990	639,345	(11,053)	2,541,176	58,281,942	1,307,226	76,359,832
1977	58,281,942	1,432,871	—	1,852,325	351,007	46,730	2,492,849	59,472,026	1,190,084	78,031,771
ESTABLISHED RESERVES										
1977	76,835,973	d	—	d	d	46,709	2,492,850	79,180,390	2,344,416	—
1978	79,180,390	2,026,962	—	2,534,342	1,018,734	3,443	2,340,406	82,423,467	3,243,077	—
1979	82,423,467	3,012,475	—	2,062,527	3,347,747	10,613	2,263,030	88,593,799	6,170,332	—
1980	88,594,374	62,043	—	1,408,320	900,050	(33,222)	2,486,016	88,445,549	(148,825)	—
1981	88,461,174	2,234,086	—	2,062,408	624,303	9,372	2,405,806	90,985,543	2,524,369	—
1982	90,985,541	1,750,541	—	1,425,609	214,029	73,450	2,466,895	91,982,275	996,734	—
1983	91,966,031	1,899,412	—	982,360	223,149	(114,502)	2,225,705	92,730,743	764,712	—
1984	92,730,742	d	—	d	d	d	2,804,502[e]	99,687,016	6,956,274	—
1985	99,145,610	d	—	d	d	d	2,909,576	98,275,160	(870,450)	—
1986	98,811,812	d	—	d	d	d	2,731,846	97,448,391	(1,363,421)	—
1987	97,448,391	d	—	d	d	d	2,834,813	95,576,913	(1,871,478)	—

a Volumes are calculated at a pressure base of 14.65 psia and at a standard temperature of 60°F.

b Includes proved reserves.

c For definition refer to Glossary.

d Not available.

e Includes net change in underground storage.

( ): Denotes negative volume.

Source: Canadian Petroleum Association.

TABLE 2-10
ESTIMATED ESTABLISHED REMAINING MARKETABLE RESERVES OF NATURAL GAS IN CANADA, BY PROVINCE, 1987[a]

(Millions of Cubic Feet)

Province	Remaining Reserves December 31, 1986	Change During Year	Remaining Reserves At December 31, 1987		
			Total[b]	Net Non-associated	Associated/ Disolved
Canada	**97,488,391**	**(1,871,478)**	**95,576,913**	**83,430,959**	**12,145,954**
Total West Canada	**96,824,233**	**(1,888,834)**	**94,935,399**	**82,790,155**	**12,145,244**
Alberta	62,113,921	(790,516)	61,323,405	51,226,149	10,097,256
Arctic Islands	14,423,587	—	14,423,587	13,382,556	1,041,031
Br. Columbia	8,529,392	(1,064,102)	7,465,290	7,103,041	362,249
Mackenzie Delta	9,168,385	—	9,168,385	8,621,782	546,603
Mainland Territories	413,005	(12,920)	400,085	391,034	9,051
Saskatchewan	2,175,943	(21,296)	2,154,647	2,065,593	89,054
Total East Canada	**624,158**	**17,356**	**641,514**	**640,804**	**710**
Ontario	619,153	17,924	637,077	637,077	—
Other E. Canada	5,005	(568)	4,437	3,727	710

a Volumes are calculated at a pressure base of 14.65 psia and at a standard temperature of 60°F.
b Underground storage not included.
( ) Denotes negative volume.
Source: Same as Table 2-9.

TABLE 2-11
CHANGES IN ESTIMATED ESTABLISHED REMAINING MARKETABLE RESERVES OF NATURAL GAS IN CANADA, BY PROVINCE, DURING 1987[a]

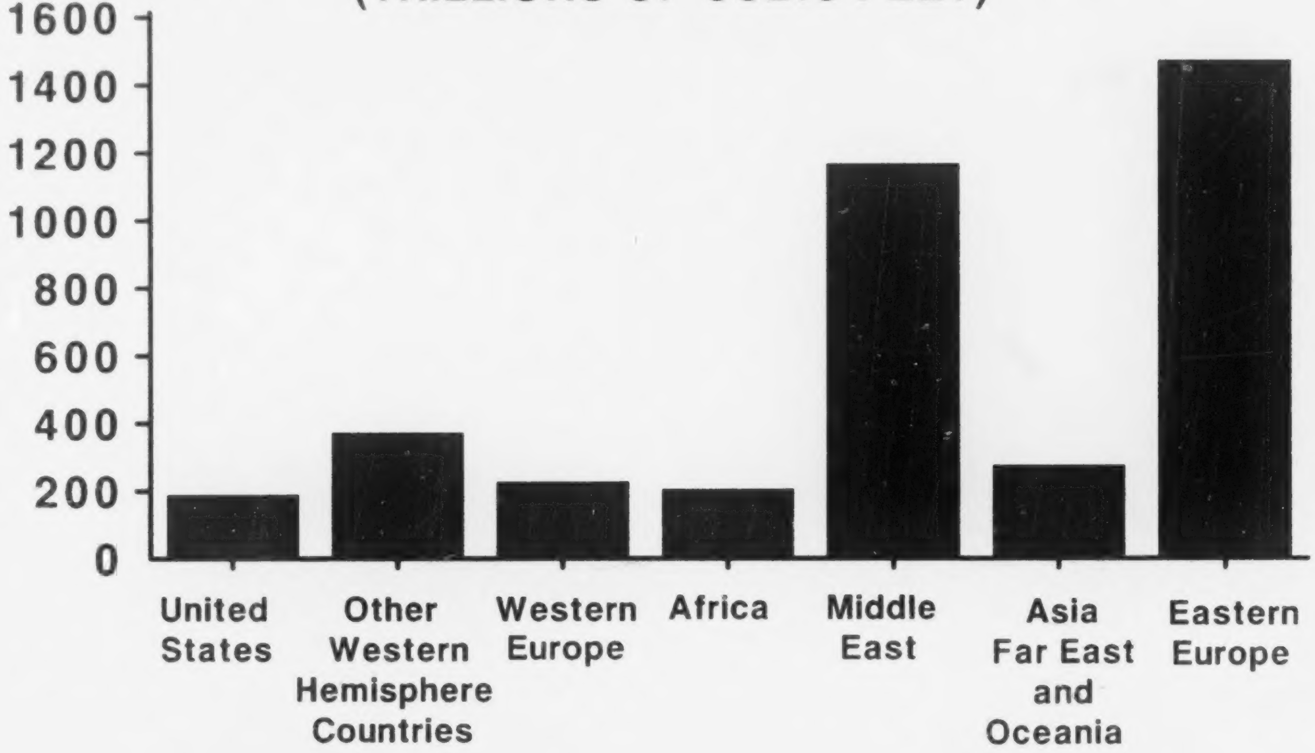
(Millions of Cubic Feet)

Province	Remaining Reserves December 31, 1986	Gross Additions	Net Production[b]	Remaining Reserves December 31, 1987
Canada	**97,448,391**	**963,335**	**2,834,812**	**95,576,913**
Total West Canada	**96,824,233**	**932,207**	**2,821,041**	**94,935,399**
Alberta	62,113,921	1,681,161	2,471,677	61,323,405
Arctic Islands	14,423,587	—	—	14,423,587
Br. Columbia	8,529,392	(783,631)	280,471	7,465,290
Mackenzie Delta	9,168,385	—	—	9,168,385
Mainland Territories	413,005	(8,377)	4,543	400,085
Saskatchewan	2,175,943	43,054	64,350	2,154,647
Total East Canada	**624,158**	**31,128**	**13,771**	**641,515**
Ontario	619,153	31,589	13,665	637,077
Other E. Canada	5,005	(461)	106	4,438

a Volumes are calculated at a pressure base of 14.65 psia and at a standard temperature of 60°F.
b Includes net change in underground storage.
( ): Denotes negative volume.
Source: Same as Table 2-9.

CHART 2-4

WORLD ESTIMATED NATURAL GAS RESERVES, 1987 (TRILLIONS OF CUBIC FEET)



WORLD TOTAL 3862.4 TRILLION CUBIC FEET

SOURCE: WORLD OIL, August, 1986

SECTION 3
NATURAL GAS SUPPLY

	1987	% Change 87/86
Maximum Day Sendout (Trillions of Btu)	73.3	+ 0.7
Production (wet) (Trillions of Btu)	19,062	+ 1.7*
Net Imports (Millions of cubic feet)	938,375	+36.2
Producing Gas Wells	253,856	+ 1.4*
New Gas Well Completions	4,967	−33.9**

*Percentage change based on preliminary data for both years.
**As estimated by the Energy Information Administration.

Beginning in January 1985, the method of reporting oil and gas well completions changed significantly. Because a substantial time lag exists between the date a well is actually completed and the date a report on the well is received by the American Petroleum Institute (API), publishing data on an "as reported" basis does not accurately reflect the timing of completion activity. A new methodology involves reporting completions on the basis of when the completions occurred. However, in some cases, it can take over two years before a well completion is reported to the API and reflected in their published data.

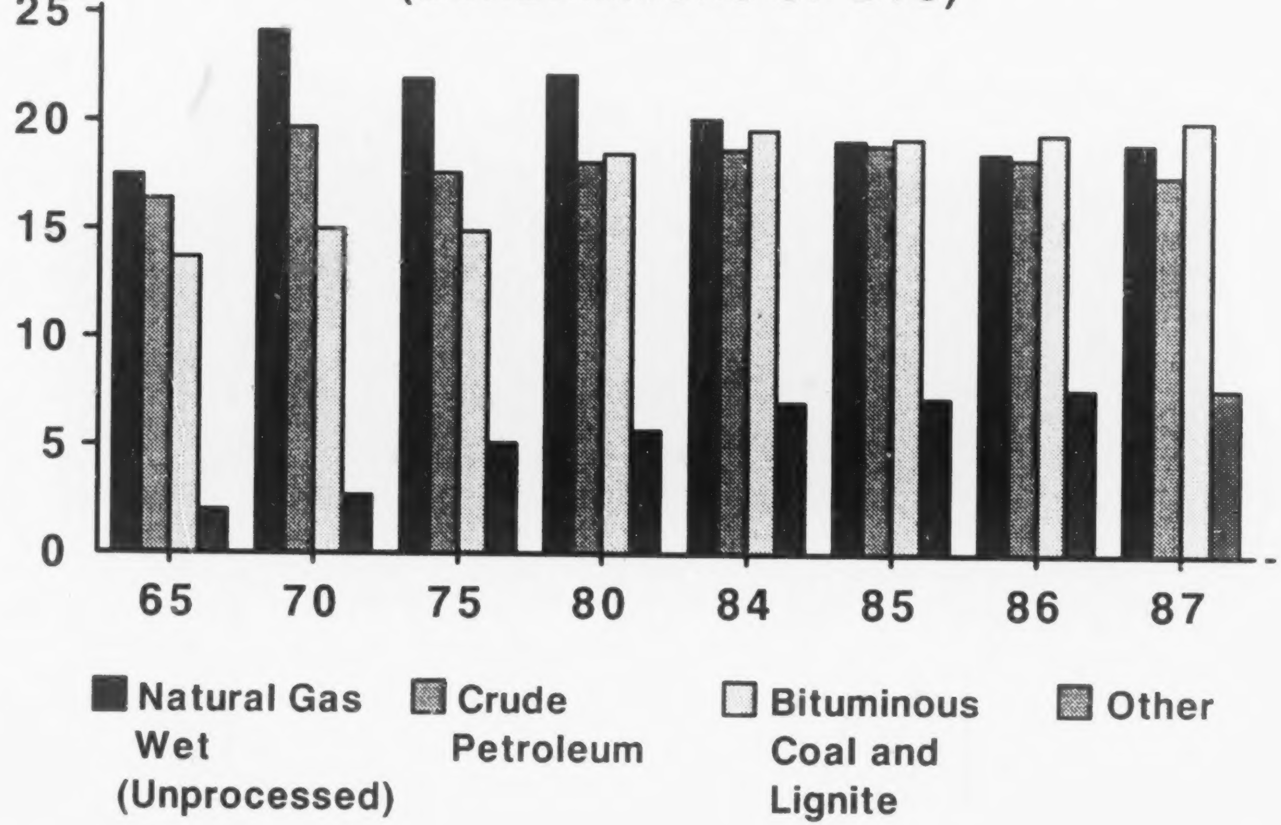
As a result, well completion data may not necessarily be comparable from year to year due to the constant updating to the well completion data provided by the API.

For those tables where both total U.S. and individual state data are published, the individual state data is "as reported" and for recent periods may be subject to significant revision. The total U.S. figures reflect *estimates* by API of the number of completion reports which will ultimately be received.

Please refer to American Gas Association, *Gas Energy Review,* April 1986, Volume 14, Number 4 for further details.

CHART 3-1

UNITED STATES ENERGY PRODUCTION (QUADRILLIONS OF BTU)



REFERENCE: TABLE 3-1

SUPPLY

TABLE 3-1
ANNUAL PRODUCTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLEAR POWER, IN THE UNITED STATES, 1965-1987[a]

(Trillions of Btu)

Year	Natural Gas Wet (unprocessed)	Crude Petroleum	Bituminous Coal and Lignite	Anthracite Coal	Hydro-power[b]	Nuclear[c]	Other[d]	Grand Total Energy
1965	17,628	16,521	13,417	378	2,033	38	e	50,015
1970	24,154	19,772	14,820	247	2,630	229	e	61,852
1975	22,014	17,729	14,990	f	3,155	1,900	72	59,860
1976	21,807	17,262	15,654	f	2,976	2,111	81	59,891
1977	21,892	17,454	15,755	f	2,333	2,702	82	60,218
1978	21,730	18,434	14,910	f	2,937	3,024	68	61,103
1979	22,362	18,104	17,539	f	2,931	2,776	89	63,801
1980	22,162	18,249	18,597	f	2,900	2,739	114	64,761
1981	22,006	18,146	18,376	f	2,758	3,008	127	64,421
1982	20,446	18,309	18,639	f	3,256	3,131	108	63,889
1983[R]	18,714	18,392	17,246	f	3,502	3,203	133	61,190
1984[R]	20,205	18,848	19,719	f	3,312	3,553	174	65,810
1985[R]	19,147	18,992	19,325	f	2,939	4,147	213	64,764
1986[R]	18,620	18,376	19,510	f	3,034	4,475	232	64,246
1987[P]	19,062	17,593	20,121	f	2,609	4,915	245	64,546

a. The 1987 unit heat values employed are: Anthracite, 11,543 Btu per pound; bituminous coal and lignite, 10,971 Btu per pound; petroleum approx. 5,800,000 Btu per barrel; natural gas dry 1,030 Btu per cubic foot; natural gas liquids obtained by using 90,595 Btu per gallon.

b. Hydropower output is converted to theoretical energy inputs calculated from national average heat rates for fossil-fueled steam-electric plants.

c. Nuclear power energy input conversion is calculated annually by the Energy Information Administration.

d. Includes geothermal power and electricity produced from wood and waste.

e. Not available.

f. Included in "Bituminous Coal and Lignite."

R–Revised. P–Preliminary.

Source: Prior to 1977 U.S. Bureau of Mines, for 1977 and beyond, data taken from U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*.

TABLE 3-2
ANNUAL PRODUCTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLEAR POWER, IN THE UNITED STATES, 1965-1987

(Percentage)

Year	Natural Gas Wet (unprocessed)	Crude Petroleum	Bituminous Coal and Lignite	Anthracite Coal	Hydro-power	Nuclear	Other[a]	Grand Total Energy
1965	35.2	33.0	26.8	0.8	4.1	0.1	b	100.0
1970	39.0	32.0	24.0	0.4	4.2	0.4	b	100.0
1975	36.8	29.6	25.0	c	5.3	3.2	.1	100.0
1976	36.4	28.8	26.2	c	5.0	3.5	.1	100.0
1977	36.4	29.0	26.1	c	3.9	4.5	.1	100.0
1978	35.6	30.2	24.4	c	4.8	4.9	.1	100.0
1979	35.0	28.4	27.5	c	4.6	4.4	.1	100.0
1980	34.2	28.2	28.7	c	4.5	4.2	.2	100.0
1981	34.1	28.2	28.5	c	4.3	4.7	.2	100.0
1982	32.0	28.6	29.2	c	5.1	4.9	.2	100.0
1983	30.6	30.1	28.2	c	5.7	5.2	.2	100.0
1984	30.7	28.6	30.0	c	5.0	5.4	.3	100.0
1985	29.6	29.3	29.8	c	4.5	6.4	.3	100.0
1986[R]	29.0	28.6	30.4	c	4.7	7.0	.3	100.0
1987[P]	29.5	27.3	31.2	c	4.0	7.6	.4	100.0

a. Includes geothermal power and electricity produced from wood and waste.

b. Not available.

c. Included in "Bituminous Coal and Lignite."

R–Revised. P–Preliminary.

Source: Same as Table 3-1.

TABLE 3-3
SUPPLY AND DISPOSITION OF GAS IN THE UNITED STATES, 1965–1986

(Millions of Cubic Feet)

	Gross Production[a]						Disposition of Marketed Production									
Year	Gas Wells	Oil Wells	Total	Repressuring	Vented and Flared	Marketed Production[b]	Extraction Loss	Lease and Plant Fuel	Net Change in Storage	Pipeline Fuel	Unaccounted For	Nonhydrocarbon Gases	Domestic Dry Production For Sale	Net Imports	Supplemental Supplies	Delivered to Consumers[c]
1965	13,523,600	4,439,500	17,963,100	1,604,204	319,143	16,039,753	1,909,697		118,115	500,524	318,711	d	13,192,706	430,262	d	13,622,968
1966	13,893,921	5,139,918	19,033,839	1,451,516	375,695	17,206,628	1,772,708		68,855	535,353	401,203	d	14,428,509	455,141	d	14,883,650
1967	15,346,853	4,904,923	20,251,776	1,590,574	489,877	18,171,325	784,534	1,140,966	184,829	575,752	296,214	d	15,189,030	482,612	d	15,671,642
1968	16,539,925	4,785,075	21,325,000	1,486,092	516,508	19,322,400	827,877	1,237,131	95,539	590,965	325,062	d	16,245,826	558,140	d	16,803,966
1969	17,489,415	5,189,780	22,679,195	1,455,205	525,750	20,698,240	866,560	1,345,648	119,500	630,962	331,587	d	17,403,983	675,647	d	18,079,630
1970	18,594,658	5,191,795	23,786,453	1,376,351	489,460	21,920,642	906,413	1,398,758	398,160	722,166	227,650	d	18,267,495	750,967	d	19,018,462
1971	18,925,136	5,162,895	24,088,031	1,310,458	284,561	22,493,012	883,127	1,413,650	331,768	742,592	338,999	d	18,782,876	854,336	d	19,637,212
1972	19,042,592	4,973,517	24,016,109	1,236,292	248,119	22,531,698	907,993	1,455,563	135,734	766,156	328,002	d	18,938,250	941,483	d	19,879,733
1973	19,371,600	4,695,602	24,067,202	1,171,361	248,292	22,647,549	916,551	1,495,915	441,504	728,177	195,863	d	18,869,539	955,732	d	19,825,271
1974	18,669,212	4,180,581	22,849,793	1,079,890	169,381	21,600,522	887,490	1,477,386	83,663	668,792	288,731	d	18,194,460	882,495	d	19,076,955
1975	17,380,293	3,723,237	21,103,530	860,956	133,913	20,108,661	872,282	1,396,277	344,054	582,963	235,068	d	16,678,020	880,333	d	17,558,353
1976	17,190,655	3,753,123	20,943,778	859,410	131,930	19,952,438	854,086	1,634,355	(165,327)	548,323	216,240	d	16,864,760	899,058	d	17,763,818
1977	17,415,983	3,681,088	21,097,071	934,801	136,807	20,025,463	862,563	1,659,145	556,631	532,669	41,063	d	16,373,392	955,375	d	17,328,767
1978	17,394,213	3,914,602	21,308,815	1,181,432	153,350	19,974,033	852,130	1,647,911	120,237	530,451	287,201	d	16,536,103	913,013	d	17,449,116
1979	18,033,879	3,849,474	21,883,353	1,245,074	167,019	20,471,260	807,845	1,498,530	248,034	600,964	372,330	d	16,943,557	1,197,710	d	18,141,267
1980	17,572,526	4,297,166	21,869,692	1,365,454	125,451	20,378,787	776,605	1,026,438	(23,269)	634,622	639,559	199,063	17,125,769	935,874	154,590	18,216,233
1981	17,336,862	4,250,591	21,587,453	1,311,735	98,017	20,177,701	774,562	927,591	297,430	642,325	500,501	221,878	16,813,414	844,826	175,702	17,833,942
1982	15,802,614	4,407,314	20,209,928	1,388,392	93,365	18,728,171	761,942	1,109,398	308,199	596,411	474,736	208,492	15,268,993	881,441	144,811	16,295,245
1983	14,146,668	4,450,426	18,597,095	1,458,054	94,962	17,044,081	789,632	978,249	(447,299)	490,042	642,061	221,937	14,369,459	865,268	131,894	15,366,621
1984	15,505,073	4,686,746	20,191,820	1,630,152	107,913	18,453,755	837,867	1,076,881	196,835	528,754	142,600	224,118	15,446,700	788,216	109,977	16,344,893
1985	14,528,147	5,006,326	19,534,475	1,915,197	94,778	17,524,500	816,370	966,047	(234,756)	503,766	354,065	326,497	14,792,511	892,256	126,363	15,811,130
1986	14,147,014	4,915,932	19,062,947	1,837,552	97,633	17,127,762	799,645	922,524	146,910	485,041	426,726	336,851	14,010,064	690,478	113,189[e]	14,813,731

a. Includes gas (mostly residue gas) blown to the air but does not include direct waste on producing properties, except where data is available.
b. "Marketed Production" equals "Total Gross Production" less "Repressuring" and "Vented and Flared." It includes an allowance for natural gas liquids content in the natural gas and nonhydrocarbon gases.
c. Defined as Domestic Dry Production For Sale plus Net Imports plus Supplemental Gas Supplies. See Table 3-16 for details on Supplemental Gas Supplies.
d. 1980 is the first year this data is available.
e. For detail see Table 3-16.
( ): Denotes negative.

Sources: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

Note: 1987 data reported by U.S. Department of Energy, *Monthly Energy Review*, February 1988 is as follows: "Marketed Production (wet)—17,850,000 million of cubic feet (MMcf); "Net Imports"—928,000 MMcf; "Net Change in Underground Storage"—minus 21,000 MMcf.

SUPPLY

TABLE 3-4
GAS UTILITY INDUSTRY, GAS SUPPLY AND DISPOSITION, 1965–1987[a]

(Trillions of Btu)

	Amount						
	1965	1970[b]	1975	1980	1985	1986[R]	1987
Supply—Produced and Purchased—Total	**13,315.9**	**18,829.5**	**16,811.5**	**17,276.4**	**14,164.1**	**12,607.8**	**11,952.2**
Natural Gas	13,315.9	18,661.8	16,490.1	16,935.3	14,016.1	12,514.0	11,871.9
Manufactured Gas	c	75.6	19.3	8.8	3.8	3.2	9.3
Liquefied Petroleum Gas	c	26.9	24.8	17.9	6.5	6.3	5.1
Substitute Natural Gas	c	1.2	261.3	198.4	76.4	43.9	20.5
Liquefied Natural Gas	c	0.0	8.4	79.6	24.7	6.4	5.8
Unclassified	c	64.0	7.6	36.4	36.6	34.0	39.6
Disposition—Total	**13,315.9**	**18,829.5**	**16,811.5**	**17.276.4**	**14,164.1**	**12,607.8**	**11,952.2**
Used in Production of Other Gases[d]	126.7	125.4	124.2	95.0	66.6	130.7	140.3
Company Use as a Fuel[e]	995.7	1,380.1	1,089.3	1,278.7	1,107.3	855.3	833.3
Sales to Ultimate Consumers	11,842.0	16,043.5	14,862.9	15,413.2	12,615.2	11,125.1	10,543.2
Other Deliveries (Net)	89.6	70.1	83.9	85.8	132.6	17.6	130.6
Placed in Storage (Net)	67.6	473.6	348.8	16.9	(326.2)	170.9	(106.6)
Unaccounted For[f]	194.3	736.8	302.4	386.8	568.6	308.2	411.4

a. Total supply figures involve some double counting. For production of supplementals see Table 3-16.
b. Includes Natural Gas only prior to 1970.
c. Not available.
d. Includes Natural Gas used for enriching, reforming and mixing.
e. Includes interdepartmental transfers.
f. Represents difference between supply and disposition, and should not be interpreted as a reliable measure of transmission efficiency.
R-Revised.

TABLE 3-5
GAS UTILITY INDUSTRY, MAXIMUM AND MINIMUM DAY SENDOUT[a] BY SOURCE OF SUPPLY, 1980–1987[b]

(Trillions of Btu)

	1980	1981	1982	1983	1984	1985	1986[R]	1987
Maximum Day Sendout—Total	**76.1**	**78.8**	**83.6**	**77.4**	**79.7**	**76.8**	**72.8**	**73.3**
Peak Shaving Facilities	1.3	2.5	3.4	2.5	1.8	2.8	1.4	1.1
Underground Storage Withdrawal	38.3	37.2	42.4	44.1	38.5	44.2	39.7	37.6
Regular Production and Purchases	36.5	39.1	37.8	30.8	39.4	29.8	31.7	34.6
Minimum Day Sendout—Total	**16.0**	**16.6**	**13.7**	**13.1**	**13.6**	**12.0**	**14.3**	**14.6**

a. Represents summation of all companies maximum/minimum day sendout, and is non-coincident.
b. Excludes sendout of pipeline companies to avoid duplication. Underground storage withdrawals include amounts from fields operated by both distributors and pipelines.
R-Revised.

TABLE 3-6
GROSS PRODUCTION OF NATURAL GAS, BY STATE, 1965-1986[a]

(Millions of Cubic Feet)

Division and State	1965	1970	1975	1980	1984	1985	1986
United States	**17,963,100**	**23,786,453**	**21,103,530**	**21,869,692**	**20,191,820**	**19,534,475**	**19,062,947**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**88,240**	**80,472**	**92,400**	**113,089**	**193,942**	**185,568**	**193,573**
New Jersey	0	0	0	0	0	0	0
New York	3,340	3,358	7,628	15,650	27,600	35,334	33,684
Pennsylvania	84,900	77,114	84,772	97,439	166,342	150,234	159,889
East North Central	**82,700**	**97,276**	**191,497**	**305,003**	**338,605**	**321,455**	**317,275**
Illinois	7,500	4,972	1,440	1,574	1,530	1,324	1,887
Indiana	2,400	153	346	463	394	367	365
Michigan	36,900	40,038	103,901	164,110	150,201	137,519	132,951
Ohio	35,900	52,113	85,810	138,856	186,480	182,245	182,072
Wisconsin	0	0	0	0	0	0	0
West North Central	**866,900**	**965,535**	**877,137**	**791,315**	**550,921**	**604,140**	**541,722**
Iowa	0	0	0	0	0	0	0
Kansas	806,800	904,475	846,164	737,246	467,382	514,415	466,897
Minnesota	0	0	0	0	0	0	0
Missouri	b	b	30	0	0	4	4
Nebraska	12,100	6,309	3,963	2,550	2,300	1,944	1,403
North Dakota	48,000	54,751	26,941	50,321	78,752	84,631	70,955
South Dakota	0	b	39	1,198	2,483	3,146	2,463
South Atlantic	**211,060**	**246,599**	**205,683**	**210,852**	**166,585**	**171,567**	**160,644**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	b	b	44,383	46,421	13,867	11,604	9,766
Georgia	0	0	0	0	0	0	0
Maryland	408	813	93	68	60	39	20
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	3,152	2,805	6,723	7,812	8,928	15,041	15,427
West Virginia	207,500	242,981	154,484	156,551	143,730	144,883	135,431
East South Central	**277,300**	**234,912**	**192,544**	**385,362**	**412,235**	**413,130**	**439,370**
Alabama	b	b	38,921	111,836	136,427	143,420	145,625
Kentucky	79,100	77,892	60,511	57,180	61,518	73,126	80,195
Mississippi	198,200	157,020	92,500	215,105	209,268	191,898	210,086
Tennessee	b	b	612	1,241	5,022	4,686	3,464
West South Central	**14,022,900**	**19,469,337**	**17,073,397**	**16,810,823**	**14,748,981**	**13,913,317**	**13,691,753**
Arkansas	104,000	183,650	121,518	127,696	162,744	181,959	153,165
Louisiana	4,764,300	8,076,157	7,242,408	7,008,489	5,888,043	5,218,098	4,964,758
Oklahoma	1,414,000	1,811,004	1,720,698	2,018,577	1,985,869	1,936,341	1,917,493
Texas	7,740,600	9,398,526	7,988,773	7,656,061	6,712,325	6,576,919	6,656,337
Mountain	**1,492,500**	**1,744,236**	**1,849,992**	**1,952,333**	**1,996,753**	**1,981,297**	**1,780,632**
Arizona	b	b	255	357	227	209	185
Colorado	155,200	115,157	174,145	191,806	180,616	189,565	175,618
Idaho	0	0	0	0	0	0	0
Montana	29,800	48,302	44,547	53,802	52,930	54,151	48,246
Nevada	0	0	0	0	0	0	0
New Mexico	956,500	1,141,889	1,227,200	1,168,049	978,236	926,174	721,217
Utah	92,100	73,386	77,607	87,766	184,606	213,302	238,388
Wyoming	258,900	365,502	326,238	450,553	600,138	597,896	596,978
Pacific	**917,800**	**945,099**	**620,880**	**1,300,915**	**1,783,798**	**1,944,001**	**1,937,978**
Alaska	12,800	217,854	253,227	893,759	1,206,370	1,343,553	1,375,054
California	905,000	727,245	367,653	407,151	574,638	596,368	558,324
Hawaii	0	0	0	0	0	0	0
Oregon	0	0	0	5	2,790	4,080	4,600
Washington	0	0	0	0	0	0	0
Other States	**3,700**	**2,987**	**0**	**0**	**0**	**0**	**0**

a. Includes gas (mostly residue gas) blown to the air, but does not include direct waste on producing properties, except where data is available.

b. Included in "Other States."

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

TABLE 3-7
NET WELLHEAD PRODUCTION OF NATURAL GAS, BY STATE, 1965-1986[a]

(Millions of Cubic Feet)

Division and State	1965	1970	1975	1980	1984	1985	1986
United States	**16,358,896**	**22,410,102**	**20,242,574**	**20,504,238**	**18,561,668**	**17,619,278**	**17,225,395**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**87,842**	**80,199**	**92,400**	**113,089**	**193,942**	**185,568**	**193,573**
New Jersey	0	0	0	0	0	0	0
New York	3,340	3,358	7,628	15,650	27,600	35,334	33,684
Pennsylvania	84,502	76,841	84,772	97,439	166,342	150,234	159,889
East North Central	**80,800**	**96,398**	**190,471**	**302,628**	**336,265**	**319,115**	**314,935**
Illinois	7,500	4,972	1,440	1,574	1,530	1,324	1,887
Indiana	2,400	153	346	463	394	367	365
Michigan	35,000	39,660	103,725	161,735	147,861	135,179	130,611
Ohio	35,900	52,113	84,960	138,856	186,480	182,245	182,072
Wisconsin	b	0	0	0	0	0	0
West North Central	**860,204**	**963,410**	**875,409**	**789,841**	**549,615**	**600,360**	**540,877**
Iowa	0	0	0	0	0	0	0
Kansas	806,683	902,668	844,471	735,772	466,447	513,387	466,144
Minnesota	0	0	0	0	0	0	0
Missouri	b	b	30	0	4	4	4
Nebraska	11,985	5,991	3,963	2,550	2,300	1,944	1,403
North Dakota	41,536	54,751	26,941	50,321	78,752	82,273	70,955
South Dakota	0	b	5	1,198	2,112	2,752	2,371
South Atlantic	**211,044**	**246,070**	**205,683**	**210,852**	**166,585**	**171,567**	**160,644**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	b	b	44,383	46,421	13,867	11,604	9,766
Georgia	0	0	0	0	0	0	0
Maryland	408	813	93	68	60	39	20
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	3,152	2,805	6,723	7,812	8,928	15,041	15,427
West Virginia	207,484	242,452	154,484	156,551	143,730	144,883	135,431
East South Central	**255,601**	**211,156**	**186,251**	**369,219**	**391,890**	**390,809**	**402,219**
Alabama	b	b	38,921	108,702	123,870	128,651	127,387
Kentucky	79,100	77,892	60,511	57,180	61,518	73,126	80,195
Mississippi	176,501	133,264	86,207	202,096	201,480	184,346	191,173
Tennessee	b	b	612	1,241	5,022	4,686	3,464
West South Central	**12,769,359**	**18,306,535**	**16,387,930**	**16,273,072**	**14,311,030**	**13,336,432**	**13,262,065**
Arkansas	83,845	181,577	117,555	112,202	137,385	155,923	132,836
Louisiana	4,589,349	7,942,365	7,116,104	6,962,775	5,850,063	5,038,715	4,919,567
Oklahoma	1,356,738	1,724,572	1,637,212	1,917,379	1,985,869	1,936,341	1,917,493
Texas	6,739,427	8,458,021	7,517,059	7,280,716	6,337,713	6,205,453	6,292,169
Mountain	**1,416,853**	**1,705,299**	**1,813,914**	**1,898,955**	**1,830,208**	**1,790,095**	**1,567,806**
Arizona	b	b	255	357	227	209	185
Colorado	131,342	112,930	174,145	191,610	180,522	188,817	175,133
Idaho	0	0	0	0	0	0	0
Montana	29,221	47,908	43,936	53,572	52,759	53,954	48,060
Nevada	0	0	0	0	0	0	0
New Mexico	945,794	1,141,889	1,219,072	1,154,992	965,716	911,181	706,732
Utah	72,306	45,633	57,160	87,766	77,137	86,145	93,695
Wyoming	238,190	356,939	319,346	410,658	553,847	549,789	544,001
Pacific	**673,493**	**798,000**	**490,516**	**546,582**	**782,133**	**825,332**	**783,276**
Alaska	7,331	146,384	170,671	235,408	300,799	327,642	313,703
California	666,162	651,616	319,845	311,169	478,544	493,610	464,973
Hawaii	0	0	0	0	0	0	0
Oregon	0	0	0	5	2,790	4,080	4,600
Washington	0	0	0	0	0	0	0
Other States	**3,700**	**2,535**	**0**	**0**	**0**	**0**	**0**

a. As defined by A.G.A. "Net Wellhead Production" equals "Gross Production" less gas for repressuring (see Table 3-3) and therefore includes natural gas liquids.

b. Included in "Other States."

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

TABLE 3-8
MARKETED PRODUCTION OF NATURAL GAS, BY STATE, 1965-1986[a]

(Millions of Cubic Feet)

Division and State	1965	1970	1975	1980	1984	1985	1986
United States	**16,039,753**	**21,920,642**	**20,108,661**	**20,378,787**	**18,453,756**	**17,524,496**	**17,127,761**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**87,801**	**80,199**	**92,304**	**113,082**	**191,542**	**181.795**	**189,853**
New Jersey	0	0	0	0	0	0	0
New York	3,340	3,358	7,628	15,643	25,200	31,561	29,964
Pennsylvania	84,461	76,841	84,676	97,439	166,342	150,234	159,889
East North Central	**77,877**	**95,967**	**188,859**	**299,195**	**332,941**	**315,791**	**311,611**
Illinois	7,396	4,850	1,440	1,574	1,530	1,324	1,887
Indiana	239	153	346	463	394	367	365
Michigan	34,558	38,851	102,113	158,302	144,537	131,855	127,287
Ohio	35,684	52,113	84,960	138,856	186,480	182,245	182,072
Wisconsin	0	0	0	0	0	0	0
West North Central	**839,751**	**940,922**	**871,006**	**781,124**	**546,964**	**596,667**	**533,435**
Iowa	0	0	0	0	0	0	0
Kansas	793,379	899,955	843,625	735,035	465,979	512,872	465,695
Minnesota	0	0	0	0	0	0	0
Missouri	b	87	30	0	4	4	4
Nebraska	10,720	5,991	2,565	2,550	2,300	1,944	1,403
North Dakota	35,652	34,889	24,786	42,346	76,734	79,289	64,102
South Dakota	b	0	0	1,193	1,947	2,558	2,231
South Atlantic	**210,976**	**246,070**	**205,683**	**210,175**	**166,524**	**171,553**	**160,590**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	b	0	44,383	45,744	13,833	11,590	9,712
Georgia	0	0	0	0	0	0	0
Maryland	408	813	93	68	60	39	20
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	3,152	2,805	6,723	7,812	8,901	15,041	15,427
West Virginia	207,416	242,452	154,484	156,551	0	144,883	135,431
East South Central	**245,801**	**204,614**	**172,697**	**349,417**	**380,199**	**385,284**	**396,063**
Alabama	b	627	37,814	105,527	122,041	127,224	126,077
Kentucky	78,976	77,892	60,511	57,180	61,518	73,126	80,195
Mississippi	166,825	126,031	74,345	185,469	191,618	180,248	186,327
Tennessee	b	64	27	1,241	5,022	4,686	3,464
West South Central	**12,507,167**	**17,922,286**	**16,298,056**	**16,195,435**	**14,251,542**	**13,279,819**	**13,210,081**
Arkansas	82,831	181,351	116,237	111,808	135,161	155,099	131,075
Louisiana	4,466,786	7,788,276	7,090,645	6,939,924	5,825,055	5,013,702	4,895,394
Oklahoma	1,320,995	1,594,943	1,605,410	1,891,824	1,985,869	1,936,341	1,917,493
Texas	6,636,555	8,357,716	7,485,764	7,251,879	6,305,457	6,174,677	6,266,119
Mountain	**1,399,156**	**1,669,891**	**1,801,478**	**1,889,983**	**1,815,697**	**1,776,751**	**1,554,464**
Arizona	b	1,101	208	214	45	85	63
Colorado	126,381	105,804	171,629	190,814	179,522	186,996	173,556
Idaho	0	0	0	0	0	0	0
Montana	28,105	42,705	40,734	51,867	51,967	52,494	46,592
Nevada	0	0	0	0	0	0	0
New Mexico	937,205	1,138,980	1,217,430	1,149,781	959,382	905,312	702,652
Utah	71,616	42,781	55,354	87,766	74,698	83,405	90,013
Wyoming	235,849	338,520	316,123	409,541	550,576	548,459	541,588
Pacific	**667,639**	**760,693**	**478,578**	**540,376**	**768,347**	**816,836**	**771,664**
Alaska	7,255	111,576	160,270	230,588	289,129	321,346	304,841
California	660,384	649,117	318,308	309,783	476,428	491,410	462,223
Hawaii	0	0	0	0	0	0	0
Oregon	0	0	0	5	2,790	4,080	4,600
Washington	0	0	0	0	0	0	0
Other States	**3,585**	**0**	**0**	**0**	**0**	**0**	**0**

a. Includes 199,063 million cubic feet of nonhydrocarbon gases in 1980, 221,937 million cubic feet in 1983, 224,118 million cubic feet in 1984, 326,497 million cubic feet in 1985, and 336,851 million cubic feet in 1986.

b. Included in "Other States."

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

TABLE 3-9
NATURAL GAS PRODUCTION PURCHASED BY ALL INTERSTATE NATURAL GAS PIPELINE COMPANIES, BY STATE, 1980-1986

(Millions of Cubic Feet)

Division and State	1980	1981	1982	1983	1984	1985	1986
Total United States	**11,604,272**	**11,959,310**	**10,933,412**	**9,496,902**	**10,421,625**	**8,917,751**	**7,578,336**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**44,577**	**70,818**	**80,820**	**74,779**	**82,081**	**109,281**	**89,192**
New Jersey	0	0	0	0	0	0	0
New York	2,729	8,606	8,167	9,187	14,368	40,121	31,295
Pennsylvania	41,848	62,212	72,653	65,592	67,713	69,160	57,897
East North Central	**44,858**	**47,535**	**50,278**	**57,895**	**53,984**	**75,082**	**34,140**
Illinois	241	195	476	234	217	1,219	5,741
Indiana	9,587	6,162	38	8	0	0	0
Michigan	0	0	0	0	0	0	0
Ohio	35,030	41,178	49,764	57,653	53,767	73,863	28,399
Wisconsin	0	0	0	0	0	0	0
West North Central	**589,922**	**499,186**	**341,751**	**336,984**	**405,312**	**431,203**	**381,849**
Iowa	0	0	0	0	0	0	0
Kansas	566,379	472,067	310,949	299,843	379,346	407,636	359,193
Minnesota	0	0	0	0	3,335	0	0
Missouri	0	0	0	0	0	0	0
Nebraska	3,322	3,561	2,944	3,004	3,547	991	770
North Dakota	19,103	22,390	25,996	32,834	18,267	21,647	21,210
South Dakota	1,118	1,168	1,862	1,303	817	929	676
South Atlantic	**165,947**	**175,378**	**162,179**	**139,596**	**161,704**	**209,172**	**195,876**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	14,996	9,659	7,724	6,385	2,915	2,769	1,888
Georgia	0	0	0	0	0	0	0
Maryland	71	59	37	31	60	35,616	22
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	7,818	8,897	6,905	4,323	8,976	14,251	61,366
West Virginia	143,062	156,763	147,513	128,857	149,753	156,536	132,600
East South Central	**195,980**	**216,027**	**201,350**	**201,611**	**227,437**	**194,620**	**183,042**
Alabama	36,592	40,867	38,953	30,079	33,653	36,101	25,880
Kentucky	47,555	50,042	38,527	32,661	47,238	45,458	43,869
Mississippi	111,833	125,086	123,586	135,058	142,509	108,984	110,227
Tennessee	0	32	284	3,813	4,037	4,077	3,066
West South Central	**9,068,369**	**9,346,583**	**8,689,062**	**7,413,344**	**8,188,459**	**6,629,637**	**5,769,879**
Arkansas	71,596	67,143	87,761	79,162	83,534	114,516	138,903
Louisiana	5,161,204	5,264,477	4,759,426	4,031,576	4,562,678	3,593,587	3,053,072
Oklahoma	953,838	1,001,138	1,118,021	888,113	986,368	824,866	691,530
Texas	2,881,731	3,013,825	2,723,854	2,414,493	2,555,879	2,096,668	1,886,374
Mountain	**1,494,619**	**1,603,783**	**1,407,972**	**1,272,693**	**1,302,648**	**1,268,756**	**924,358**
Arizona	0	0	0	0	0	0	0
Colorado	157,385	158,639	160,839	122,040	116,262	95,180	80,946
Idaho	0	524	78	0	0	0	0
Montana	30,458	33,701	31,842	31,658	24,351	18,021	20,151
Nevada	0	0	0	0	0	0	0
New Mexico	936,305	1,003,163	806,724	713,159	736,216	739,709	483,939
Utah	49,990	63,537	70,855	53,165	52,753	52,925	37,234
Wyoming	320,481	344,219	337,634	352,671	373,066	362,921	302,088
Pacific	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Source: U.S. Department of Energy, Energy Information Administration, *Gas Supplies of Interstate Natural Gas Pipeline Companies*, 1986.

TABLE 3-10
TOTAL OFFSHORE PRODUCTION OF NATURAL GAS AND PERCENT STATE/FEDERALLY CONTROLLED, BY STATE, 1965–1987

	Alaska			California			Louisiana			Texas			Total		
		Percent			Percent			Percent			Percent			Percent	
Year	MMcf	State	OCS	MMcf	State	OCS	MMcf	State	OCS	MMcf	State	OCS	MMcf	State	OCS
1965	11	100	—	40,770	100	—	862,738	25	75	27,520	100	—	931,038	31	69
1966	1,200	100	—	46,839	100	—	1,248,237	23	77	63,682	29	71	1,359,958	26	74
1967	9,046	100	—	46,732	100	—	1,482,622	27	73	160,798	22	78	1,699,198	30	70
1968	25,807	100	—	86,565	99	1	1,906,483	26	74	300,689	29	71	2,319,543	34	66
1969	43,243	100	—	83,904	94	6	2,380,225	23	77	238,056	47	53	2,745,429	29	71
1970	83,140	100	—	71,121	83	17	2,868,466	21	79	264,661	50	50	3,287,388	26	74
1971	86,326	100	—	61,448	74	26	3,207,475	18	82	235,600	67	33	3,590,850	23	77
1972	76,819	100	—	44,781	78	22	3,485,003	17	83	277,282	47	53	3,883,885	22	78
1973	74,655	100	—	37,883	81	19	3,612,878	15	85	251,038	41	59	3,976,454	19	81
1974	74,672	100	—	34,505	84	16	3,867,751	13	87	269,577	41	59	4,246,505	17	83
1975	76,295	100	—	27,272	85	15	3,840,631	13	87	220,530	44	56	4,164,727	17	83
1976	74,143	100	—	22,459	84	16	4,012,801	13	87	205,993	55	45	4,315,396	17	83
1977	77,540	100	—	17,527	81	19	4,133,610	12	88	268,250	68	32	4,496,927	17	83
1978	74,910	100	—	17,668	80	20	4,639,460	11	89	402,000	42	58	5,134,039	15	85
1979	73,792	100	—	16,417	82	18	4,635,487	10	90	719,208	29	71	5,444,904	14	86
1980	64,543	100	—	16,182	81	19	4,422,492	9	91	879,020	29	71	5,382,236	14	86
1981	72,307	100	—	26,237	51	49	4,480,934	8	92	966,983	24	76	5,546,462	12	88
1982	68,372	100	—	31,758	44	56	4,163,089	9	91	1,104,987	22	78	5,368,207	13	87
1983	68,837	100	—	29,878	46	54	3,490,146	9	91	998,951	15	85	4,587,812	12	88
1984	68,688	100	—	41,643	33	67	3,892,103	8	92	1,043,384	11	89	5,045,819	10	90
1985	62,796	100	—	68,647	28	72	3,346,856	7	93	943,057	11	89	4,421,357	9	91
1986	63,351	100	—	60,942	30	70	3,155,961	7	93	1,093,497	10	90	4,373,751	10	90
1987	61,233	100	—	53,991	24	76	3,401,277	7	93	1,303,074	8	92	4,819,576	8	92

Source: U.S. Department of the Interior, Minerals Management Service, *Federal Offshore Statistics*.
Note: Totals may not add due to independent rounding.

TABLE 3-11
INTERSTATE MOVEMENTS AND MOVEMENTS ACROSS U.S. BORDERS OF NATURAL AND SUPPLEMENTAL GAS, 1986[a]

(Millions of Cubic Feet)

Division and State	Interstate Movements			Movements Across U.S. Borders		
	Receipts	Deliveries	Net	Receipts[b]	Deliveries[c]	Net
United States	**45,248,194**	**45,248,194**	**0**	**1,079,507**	**389,030**	**690,478**
New England	**532,016**	**224,543**	**307,473**	**6,806**	**0**	**6,806**
Connecticut	189,519	110,207	79,312	0	0	0
Maine	2,562	0	2,562	0	0	0
Massachusetts	211,244	22,430	188,814	1,669	0	1,669
New Hampshire	12,584	2,435	10,149	0	0	0
Rhode Island	116,107	89,471	26,636	0	0	0
Vermont	0	0	0	5,137	0	5,137
Middle Atlantic	**3,910,432**	**2,327,056**	**1,583,376**	**35,720**	**0**	**35,720**
New Jersey	940,391	570,213	370,178	0	0	0
New York	1,003,593	316,105	687,488	35,720	0	35,720
Pennsylvania	1,966,448	1,440,738	525,710	0	0	0
East North Central	**7,132,702**	**4,043,484**	**3,089,218**	**0**	**321,194**	**(321,194)**
Illinois	1,935,509	1,047,869	887,640	0	0	0
Indiana	1,626,913	1,222,332	404,581	0	0	0
Michigan	907,933	0	907,933	0	321,194	(321,194)
Ohio	1,963,447	1,375,756	587,691	0	0	0
Wisconsin	698,900	397,527	301,373	0	0	0
West North Central	**4,978,828**	**4,844,504**	**134,324**	**485,505**	**6,183**	**479,322**
Iowa	957,733	745,415	212,318	0	0	0
Kansas	1,232,696	1,380,015	(147,319)	0	0	0
Minnesota	336,917	571,718	(234,801)	485,505	6,183	479,322
Missouri	1,171,668	925,412	246,256	0	0	0
Nebraska	1,022,406	911,908	110,498	0	0	0
North Dakota	97,599	172,405	(74,806)	0	0	0
South Dakota	159,809	137,631	22,178	0	0	0
South Atlantic	**6,413,106**	**5,387,628**	**1,025,478**	**0**	**0**	**0**
Delaware	34,394	1,926	32,468	0	0	0
District of Columbia	29,956	0	29,956	0	0	0
Florida	275,182	287	274,895	0	0	0
Georgia	1,217,373	942,159	275,214	0	0	0
Maryland	829,464	669,729	159,735	0	0	0
North Carolina	844,801	708,279	136,522	0	0	0
South Carolina	943,995	844,801	99,194	0	0	0
Virginia	945,391	830,616	114,775	0	0	0
West Virginia	1,292,550	1,389,831	(97,281)	0	0	0
East South Central	**13,060,253**	**12,628,622**	**431,631**	**0**	**0**	**0**
Albama	2,446,444	2,328,949	117,495	0	0	0
Kentucky	2,865,860	2,762,789	103,071	0	0	0
Mississippi	4,689,745	4,668,235	21,510	0	0	0
Tenneessee	3,058,204	2,868,649	189,555	0	0	0
West South Central	**4,762,890**	**11,726,460**	**(6,963,570)**	**0**	**372**	**(372)**
Arkansas	2,107,365	2,058,532	48,833	0	0	0
Louisiana	1,498,208	4,850,695	(3,352,487)	0	0	0
Oklahoma	542,020	1,724,092	(1,182,072)	0	0	0
Texas	615,297	3,093,141	(2,477,844)	0	372	(372)
Mountain	**2,596,982**	**3,443,840**	**(846,858)**	**444,264**	**11,049**	**433,215**
Arizona	1,043,759	943,306	100,453	0	1,525	(1,525)
Colorado	414,997	319,531	95,466	0	0	0
Idaho	49,531	362,124	(312,593)	348,306	0	348,306
Montana	39,479	114,214	(74,735)	95,958	9,524	86,434
Nevada	32,709	2,203	30,506	0	0	0
New Mexico	781,653	1,157,115	(375,462)	0	0	0
Utah	119,557	80,968	38,589	0	0	0
Wyoming	115,297	464,379	(349,082)	0	0	0
Pacific	**1,860,988**	**622,056**	**1,238,932**	**107,212**	**50,233**	**56,977**
Alaska	0	0	0	0	50,172	(50,172)
California	1,170,859	0	1,170,859	0	0	0
Hawaii	0	0	0	0	0	0
Oregon	344,001	278,055	65,946	0	0	0
Washington	346,128	344,001	2,127	107,212	61	107,151
Other States						

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a. Supplemental Gas Supplies totaled 113,189 million cubic feet. See Table 3-16.

b. For detail by country see Table 3-13.

c. For detail by country see Table 3-12.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

TABLE 3-12
EXPORTS OF NATURAL GAS FROM THE UNITED STATES, 1965-1987

(Millions of Cubic Feet)

Year	Total	Canada	Mexico	Japan[a]
1965	26,132	17,979	8,153	0
1966	24,639	20,281	4,358	0
1967	81,614	70,456	11,158	0
1968	93,745	81,647	12,098	0
1969	51,304	34,931	13,391	2,982
1970	69,831	10,878	14,678	44,257
1971	80,212	14,349	15,632	50,231
1972	78,014	15,553	14,579	47,882
1973	77,169	14,824	13,999	48,346
1974	76,789	13,263	13,268	50,258
1975	72,675	10,219	9,454	53,002
1976	64,710	7,506	7,425	49,779
1977	55,626	31	3,940	51,655
1978	52,533	66	4,033	48,434
1979	55,673	76	4,308	51,289
1980	48,731	113	3,886	44,732
1981	59,372	106	3,337	55,929
1982	51,728	162	1,705	49,861
1983	54,639	136	1,646	52,857
1984	54,753	127	1,786	52,840
1985	55,268	178	2,207	52,883
1986	61,271	9,203	1,896	50,172
1987	54,020	3,297	2,125	48,599

a. LNG exports from Alaska.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Monthly*.

TABLE 3-13
IMPORTS OF NATURAL GAS TO THE UNITED STATES, 1965-1987

(Millions of Cubic Feet)

Year	Total	Canada	Mexico	Algeria[a]
1965	456,394	404,686	51,708	0
1966	479,780	430,189	49,591	0
1967	564,226	513,255	50,971	0
1968	651,885	604,462	47,423	0
1969	726,951	680,106	46,845	0
1970	820,780	778,687	41,336	757
1971	934,548	912,426	20,689	1,433
1972	1,019,496	1,009,323	8,140	2,032
1973	1,032,901	1,027,883	1,632	3,388
1974	959,284	959,063	222	0
1975	953,008	948,115	0	4,893
1976	963,768	953,613	0	10,155
1977	1,011,002	997,295	2,384	11,324
1978	965,545	881,123	0	84,422
1979	1,253,383	1,000,775	0	252,608
1980	984,767	796,507	102,410	85,850
1981	903,949	762,113	105,013	36,824
1982	933,336	783,407	94,794	55,136
1983	918,407	711,923	75,361	131,124
1984	843,060	755,368	51,502	36,191
1985	949,715	926,056	0	23,659
1986[R]	750,449	748,780	0	1,669
1987	992,395	992,395	0	0

a. Quantities represent total LNG imports from overseas into the U.S. 1987 imports from Indonesia.
R - Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Monthly*.

TABLE 3-14
NATURAL GAS DELIVERED TO CONSUMERS BY STATE, 1965-1986[a]

(Millions of Cubic Feet)

Division and State	1965	1970	1975	1980	1984	1985	1986[b]
United States	**13,622,968**	**19,018,462**	**17,558,353**	**18,216,233**	**16,344,893**	**15,811,130**	**14,813,731**
New England	**175,051**	**242,507**	**254,070**	**297,506**	**337,857**	**343,158**	**307,009**
Connecticut	40,722	60,524	63,968	72,512	80,924	77,864	78,264
Maine	0	10,691[c]	13,534[c]	2,166	2,444	2,520	2,465
Massachusetts	113,994	146,226	153,461	181,912	207,564	217,503	184,727
New Hampshire	4,084	d	d	9,448	10,506	10,545	10,269
Rhode Island	16,251	25,066	23,107	27,477	31,557	29,733	26,270
Vermont	0	d	d	3,991	4,862	4,993	5,014
Middle Atlantic	**1,357,337**	**1,772,600**	**1,451,698**	**1,818,067**	**1,837,082**	**1,723,100**	**1,647,322**
New Jersey	209,306	321,910	243,714	339,358	415,852	376,982	350,632
New York	540,672	707,219	573,699	733,800	784,243	758,031	724,481
Pennsylvania	607,359	743,471	634,285	744,909	636,987	588,087	572,209
East North Central	**2,706,665**	**3,843,966**	**3,718,831**	**3,628,619**	**3,231,263**	**3,090,195**	**2,928,230**
Illinois	742,906	1,145,379	1,080,787	1,074,771	1,017,180	946,614	911,974
Indiana	349,827	534,214	467,736	480,346	446,210	428,124	389,312
Michigan	548,390	795,317	865,539	846,278	698,672	690,493	648,981
Ohio	866,589	1,037,801	944,925	883,613	767,095	719,393	702,851
Wisconsin	198,953	331,255	359,844	343,611	302,106	305,571	275,112
West North Central	**1,398,950**	**1,826,005**	**1,686,051**	**1,455,928**	**1,199,852**	**1,165,391**	**1,061,556**
Iowa	236,443	330,363	329,703	256,900	224,314	215,553	199,640
Kansas	385,364	481,483	402,273	411,494	287,328	274,900	241,346
Minnesota	247,561	334,872	327,315	276,717	249,040	251,243	237,361
Missouri	332,219	416,783	362,130	312,872	259,904	255,636	238,144
Nebraska	155,359	207,550	207,371	152,283	129,745	120,496	100,762
North Dakota	15,069	18,645	24,757	21,660	25,109	22,682	21,189
South Dakota	26,935	36,309	32,502	24,002	24,412	24,881	23,114
South Atlantic	**909,869**	**1,465,035**	**1,268,171**	**1,390,415**	**1,303,188**	**1,221,828**	**1,217,169**
Delaware	17,969	26,421	18,603	29,797	42,957	38,488	33,005
District of Columbia	e	e	e	27,868	29,054	28,526	29,229
Florida	182,093	332,223	271,471	304,638	291,128	278,666	278,439
Georgia	206,560	325,650	322,383	307,827	301,331	276,446	273,799
Maryland	113,943[f]	179,784[f]	163,462[f]	156,300	156,868	148,589	150,477
North Carolina	71,473	145,076	111,276	147,448	138,228	129,081	130,787
South Carolina	84,564	156,559	120,308	139,214	105,842	95,225	96,175
Virginia	88,907	128,492	118,083	149,980	136,757	134,589	135,725
West Virginia	144,360	170,830	142,585	127,343	101,023	92,218	89,533
East South Central	**727,845**	**1,009,983**	**809,664**	**856,158**	**798,830**	**727,003**	**682,301**
Alabama	216,998	278,414	245,287	242,793	213,516	202,901	187,654
Kentucky	142,438	209,991	182,781	180,368	162,985	149,102	140,704
Mississippi	189,603	293,154	183,807	219,828	228,840	195,058	179,610
Tennessee	178,806	228,424	197,789	213,169	193,489	179,942	174,333
West South Central	**3,848,796**	**5,545,215**	**5,332,025**	**5,873,159**	**4,967,311**	**4,720,819**	**4,583,676**
Arkansas	255,637	359,338	241,803	260,319	193,694	174,991	184,148
Louisiana	857,118	1,482,275	1,425,686	1,523,691	1,241,850	1,086,006	1,149,230
Oklahoma	389,314	475,974	565,387	639,642	533,712	473,906	448,808
Texas	2,346,727	3,227,628	3,099,149	3,449,507	2,998,055	2,985,916	2,801,490
Mountain	**757,368**	**1,020,744**	**982,840**	**842,444**	**693,082**	**657,276**	**576,447**
Arizona	136,297	168,994	139,130	144,511	107,434	112,228	88,587
Colorado	219,602	277,739	294,760	241,765	211,752	200,976	181,770
Idaho	32,831	42,367	56,182	44,835	34,977	36,243	32,110
Montana	64,320	81,992	75,441	54,460	42,914	42,879	37,272
Nevada	27,679	52,558	61,251	58,284	42,173	39,087	33,746
New Mexico	130,072	191,818	172,638	146,579	101,869	78,453	72,830
Utah	105,524	120,814	116,620	106,647	106,188	104,915	90,784
Wyoming	41,043	84,462	66,818	45,363	45,775	42,495	39,348
Pacific	**1,741,087**	**2,292,407**	**2,055,003**	**2,053,937**	**1,976,425**	**2,162,360**	**1,810,021**
Alaska	5,917	41,672	66,815	122,966	140,535	143,470	127,812
California	1,572,367	2,017,393	1,727,729	1,729,650	1,633,122	1,806,398	1,496,008
Hawaii	0	0	0	3,131	2,375	2,483	2,463
Oregon	55,383	89,776	101,980	73,083	75,958	78,297	67,349
Washington	107,420	143,566	158,479	125,107	124,435	131,712	116,389

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a. Includes deliveries made directly to end users in addition to gas utility sales as shown in Table 6-7.
b. Includes 113.189 million cubic feet (MMcf) of Supplemental Gas Supplies, less 336,851 MMcf of Nonhydrocarbon Gases.
c. Includes New Hampshire and Vermont.
d. Included in Maine.
e. Included in Maryland.
f. Includes District of Columbia.

Sources: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

TABLE 3-15
TRANSPORTATION VOLUMES DELIVERED TO END USERS, 1983-1986[a]

(MMCF)

Division and State	1983 Industrial	1983 Electric Generation	1984 Industrial	1984 Electric Generation	1985 Industrial	1985 Electric Generation	1986 Industrial	1986 Electric Generation
United States	**1,087,737**	**584,181**	**1,559,503**	**910,852**	**1,839,611**	**715,121**	**2,240,381**	**720,902**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**28**	**11**
Middle Atlantic	**36,391**	**89**	**66,041**	**7,806**	**90,997**	**13,005**	**110,331**	**31,173**
New Jersey	2,589	0	6,730	6,638	12,333	4,287	8,688	5,952
New York	2,658	89	4,317	1,168	8,794	8,718	19,697	25,077
Pennsylvania	31,144	0	54,994	0	69,870	0	81,946	144
East North Central	**68,020**	**0**	**129,485**	**0**	**237,072**	**0**	**375,039**	**2,790**
Illinois	5,151	0	23,480	0	57,025	0	67,033	0
Indiana	[illegible]	0	10,798	0	33,802	0	61,473	0
Michigan	[illegible]	0	4,071	0	22,816	0	79,970	2,790
Ohio	57,827	0	91,136	0	119,347	0	147,617	0
Wisconsin	0	0	0	0	4,082	0	18,946	0
West North Central	**995**	**622**	**1,092**	**615**	**2,668**	**306**	**9,768**	**544**
Iowa	0	0	0	0	169	0	3,597	0
Kansas	995	622	834	615	1,385	306	3,049	518
Minnesota	0	0	0	0	0	0	1,192	7
Missouri	0	0	35	0	805	0	958	19
Nebraska	0	0	0	0	257	0	435	0
North Dakota	0	0	147	0	52	0	373	0
South Dakota	0	0	76	0	0	0	164	0
South Atlantic	**18,138**	**67,673**	**47,904**	**58,126**	**91,804**	**49,699**	**112,411**	**37,921**
Delaware	0	0	2,698	0	5,921	0	5,068	0
District of Columbia	0	0	0	0	0	0	0	0
Florida	5,154	67,673	3,025	57,746	4,575	49,110	3,211	37,805
Georgia	0	0	0	0	11,080	0	31,472	0
Maryland	4,745	0	22,081	0	30,165	0	31,008	0
North Carolina	1,816	0	4,390	380	8,861	589	2,890	116
South Carolina	2,217	0	1,819	0	1,106	0	422	0
Virginia	179	0	2,885	0	12,446	0	14,137	0
West Virginia	4,027	0	11,006	0	17,650	0	24,203	0
East South Central	**56,745**	**16,371**	**66,950**	**11,617**	**86,838**	**13,296**	**119,527**	**12,116**
Alabama	17,518	1,142	17,656	229	26,554	853	27,643	775
Kentucky	632	0	1,669	0	5,137	0	20,113	0
Mississippi	38,595	15,229	47,395	11,388	35,935	12,443	40,908	11,341
Tennessee	0	0	230	0	19,212	0	30,863	0
West South Central	**879,547**	**475,256**	**1,195,858**	**804,657**	**1,264,426**	**615,127**	**1,390,469**	**618,511**
Arkansas	3,778	0	15,960	0	29,546	0	48,694	0
Louisiana	317,906	151,110	419,444	130,889	368,603	108,660	323,895	176,140
Oklahoma	0	204,262	523	197,867	26,846	179,901	93,807	180,481
Texas	557,863	119,884	759,931	475,901	839,431	326,566	924,073	261,890
Mountain	**4,789**	**11,854**	**6,375**	**15,436**	**17,574**	**8,551**	**24,043**	**188**
Arizona	0	4,462	0	6,937	1,428	0	0	0
Colorado	124	0	476	0	4,717	0	10,921	188
Idaho	3,543	0	4,066	0	4,743	0	2,032	0
Montana	677	0	1,118	0	761	0	1,254	0
Nevada	0	0	0	0	0	0	0	0
New Mexico	0	7,392	66	8,499	64	8,551	0	0
Utah	0	0	0	0	0	0	0	0
Wyoming	445	0	649	0	5,861	0	9,836	0
Pacific	**23,114**	**12,315**	**45,799**	**12,595**	**48,231**	**15,137**	**98,764**	**17,647**
Alaska	20,131	12,092	19,293	12,361	20,493	15,015	19,257	11,742
California	1,065	223	23,785	234	23,762	122	68,982	5,905
Hawaii	0	0	0	0	0	0	0	0
Oregon	1,752	0	2,586	0	3,264	0	5,255	0
Washington	166	0	135	0	712	0	5,270	0

a. Is part of the total deliveries to end users as shown in Table 3-14.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual.*

TABLE 3-16
SUPPLEMENTAL GAS SUPPLIES BY STATE, 1986

(Millions of Cubic Feet)

Division and State	Total	Synthetic Natural Gas	Propane-Air	Refinery Gas	Other[a]
United States	**113,189**	**81,951**	**3,627**	**12,734**	**14,877**
New England	**3,221**	**712**	**2,498**	**11**	**0**
Connecticut	298	0	298	0	0
Maine	0	0	0	0	0
Massachusetts	2,379	712	1,656	11	0
New Hampshire	362	0	362	0	0
Rhode Island	182	0	182	0	0
Vermont	0	0	0	0	0
Middle Atlantic	**13,001**	**604**	**266**	**11,618**	**513**[b,c]
New Jersey	12,099	223	31	11,619	226[b]
New York	707	381	39	0	287[c]
Pennsylvania	196	0	196	0	0
East North Central	**33,268**	**28,125**	**70**	**1,104**	**3,969**[d,e]
Illinois	22,980	22,957	23	0	0
Indiana	2,351	0	25	1,104	1,222[d]
Michigan	2,754	0	7	0	2,747[e]
Ohio	5,182	5,168	14	0	0
Wisconsin	1	0	1	0	0
West North Central	**52,036**	**49,847**	**8**	**0**	**2,181**[c,e]
Iowa	44	0	5	0	39[c]
Kansas	0	0	0	0	0
Minnesota	2	0	2	0	0
Missouri	1	0	1	0	0
Nebraska	2,142	0	0	0	2,142[e]
North Dakota	49,847	49,847	0	0	0
South Dakota	0	0	0	0	0
South Atlantic	**437**	**31**	**359**	**0**	**47**[c]
Delaware	9	0	9	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	124	0	77	0	47[c]
Maryland	155	25	130	0	0
North Carolina	43	0	43	0	0
South Carolina	31	0	31	0	0
Virginia	75	6	69	0	0
West Virginia	0	0	0	0	0
East South Central	**17**	**0**	**17**	**0**	**0**
Alabama	3	0	3	0	0
Kentucky	1	0	1	0	0
Mississippi	0	0	0	0	0
Tennessee	13	0	13	0	0
West South Central	**19**	**0**	**19**	**0**	**0**
Arkansas	0	0	0	0	0
Louisiana	0	0	0	0	0
Oklahoma	0	0	0	0	0
Texas	19	0	19	0	0
Mountain	**8,536**	**0**	**370**	**0**	**8,166**[e]
Arizona	91	0	91	0	0
Colorado	8,095	0	18	0	8,077[e]
Idaho	0	0	0	0	0
Montana	0	0	0	0	0
Nevada	11	0	11	0	0
New Mexico	0	0	0	0	0
Utah	0	0	0	0	0
Wyoming	339	0	250	0	89[e]
Pacific	**2,650**	**2,630**	**20**	**0**	**0**
Alaska	0	0	0	0	0
California	0	0	0	0	0
Hawaii	2,630	2,630	0	0	0
Oregon	10	0	10	0	0
Washington	10	0	10	0	0

a. Includes coke oven gas, manufactured gas, biomass gas, and air injection for Btu stabilization.
b. Manufactured gas.
c. Biomass gas.
d. Coke oven gas.
e. Air injection for Btu stabilization.
Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual* 1986.

TABLE 3-17
NATURAL GAS TREATED FOR NATURAL GASOLINE AND ALLIED PRODUCTS, AND QUANTITIES AND VALUE OF PRODUCTS RECOVERED, 1965-1987[a]

Year	Natural Gas Treated	Products Recovered							
		Natural Gasoline		Liquefied Petroleum Gases		Finished Gasoline and Naphtha		Other Products[b]	
	(Millions of cubic feet)	Quantity (Thousands of gallons)	Value (Thousands of dollars)	Quantity (Thousands of gallons)	Value (Thousands of dollars)	Quantity (Thousands of gallons)	Value (Thousands of dollars)	Quantity (Thousands of gallons)	Value (Thousands of dollars)
1965	13,772,101	5,457,367	360,603	11,257,267	417,249	439,267	36,270	1,391,436	97,481
1966	14,924,429	5,564,139	366,332	12,134,294	527,223	380,135	33,380	1,604,154	120,426
1967	15,641,633	5,850,271	389,156	13,717,861	632,994	307,263	28,044	1,731,727	129,742
1968	16,316,674	6,210,708	411,695	14,753,004	552,335	280,728	26,577	1,868,622	133,407
1969	17,655,108	6,633,018	457,986	15,895,194	498,927	374,514	36,954	1,467,396	108,144
1970	18,509,309	6,935,838	468,602	16,783,662	672,088	240,702	23,234	1,488,270	111,188
1971	19,252,807	6,942,474	496,676	17,540,628	769,397	224,784	23,210	1,240,344	96,771
1972	19,906,893	6,875,442	500,425	18,678,912	828,718	186,732	20,737	1,063,986	83,261
1973	19,679,291	6,791,736	568,214	18,775,386	1,188,289	136,038	13,902	942,606	86,668
1974	18,684,480	6,212,766	974,825	18,813,732	1,980,769	52,878	10,028	797,664	122,305
1975	17,748,426	5,620,608	777,637	18,651,612	1,893,890	45,528	8,411	712,488	92,650
1976	17,717,951	5,575,584	882,718	18,369,372	2,298,647	40,572	9,650	670,362	93,074
1977	17,569,835	5,587,134	c	18,604,152	c	30,156	c	577,668	c
1978	c	5,306,784	c	18,124,512	c	28,896	c	567,420	c
1979	c	4,042,668	c	26,008,878	c	271,908	c	917,952	c
1980	c	4,560,696	c	18,518,304	c	239,694	c	864,360	c
1981	c	4,471,740	c	19,259,772	c	154,014	c	773,472	c
1982	c	3,850,308	c	19,277,622	c	93,030	c	545,916	c
1983	c	3,015,684	c	20,142,276	c	128,772	c	608,160	c
1984	c	4,490,136	c	20,506,248	c	2,898	c	52,752	c
1985	c	4,321,212	c	20,131,440	c	89,124	c	127,260	c
1986	c	4,122,930	c	19,581,912	c	4,872	c	62,286	c
1987	c	4,462,626	c	19,927,362	c	5,166	c	61,068	c

a. Due to changes in reporting requirements, 1979-1987 data is not comparable with prior years.
b. Includes kerosene, distillate fuel oil, and miscellaneous products.
c. Not available.
Source: U.S. Department of Energy, Energy Information Administration, *Petroleum Supply Annual*, 1987.

TABLE 3-18
NUMBER OF PRODUCING GAS WELLS, BY STATE, 1965-1987[a]

Division and State	1965	1970	1975	1980	1985	1986[R]	1987[P]
United States	**111,680**	**117,483**	**132,095**	**182,004**	**243,344**	**241,527**	**253,856**
New England	**0**	**0**	**0**	**0**		**0**	**0**
Middle Atlantic	**18,666**	**16,839**	**18,200**	**21,976**	**31,000**	**32,547**	**31,180**
New Jersey	0	0	0	0	0	0	0
New York	1,150	600	900	2,076	4,500	4,947	5,180
Pennsylvania	17,516	16,239	17,300	19,900	26,500	27,600	26,000
East North Central	**7,626**	**9,082**	**11,110**	**18,442**	**33,393**	**34,813**	**35,085**
Illinois	25	8	41	70	123	152	238
Indiana	275	50	478	698	1,272	1,289	808
Michigan	226	1,235	209	423	655	651	670
Ohio	7,100	7,789	10,382	17,251	31,343	32,721	33,369
Wisconsin	0	0	0	0	0	0	0
West North Central	**7,281**	**8,735**	**8,925**	**12,935**	**16,109**	**11,615**	**11,435**
Iowa	0	0	0	0	0	0	0
Kansas	7,200	8,660	8,865	12,820	15,980	11,485	11,280
Minnesota	0	0	0	0	0	0	0
Missouri	11	11	3	0	4	9	0
Nebraska	39	35	19	22	19	16	0
North Dakota	31	29	18	80	62	61	103
South Dakota	0	0	20	13	44	44	52
South Atlantic	**19,719**	**20,833**	**21,901**	**26,167**	**32,977**	**33,979**	**34,635**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0
Maryland	20	16	15	9	7	6	0
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	99	115	186	258	495	573	685
West Virginia	19,600	20,702	21,700	25,900	32,475	33,400	33,950
East South Central	**6,490**	**7,255**	**7,684**	**8,922**	**11,846**	**12,111**	**13,132**
Alabama	0	2	45	314	863	1,029	1,100
Kentucky	6,100	6,913	7,386	7,984	9,285	9,747	10,493
Mississippi	370	325	248	447	710	414	749
Tennessee	20	15	5	177	988	921	790
West South Central	**40,502**	**42,283**	**48,440**	**71,447**	**88,415**	**86,507**	**91,641**
Arkansas	744	1,008	1,128	1,114	2,623	2,719	2,847
Louisiana	8,563	9,690	11,359	16,190	16,716	15,313	16,647
Oklahoma	7,447	8,168	9,769	16,419	24,756	25,762	26,595
Texas	23,748	23,417	26,184	37,724	44,320	42,713	45,552
Mountain	**10,352**	**11,425**	**14,189**	**20,914**	**27,945**	**28,540**	**32,062**
Arizona	8	4	1	1	1	1	0
Colorado	701	861	1,380	2,997	4,401	4,398	3,948
Idaho	0	0	0	0	0	0	0
Montana	784	739	1,235	1,881	2,260	2,799	2,100
Nevada	0	0	0	0	0	0	0
New Mexico	8,010	8,848	10,352	14,571	18,308	18,647	23,413
Utah	148	173	271	200	755	594	497
Wyoming	701	800	950	1,264	2,220	2,101	2,104
Pacific	**1,044**	**1,031**	**1,646**	**1,201**	**1,659**	**1,415**	**1,380**
Alaska	11	51	61	71	84	85	87
California	1,033	980	1,585	1,125	1,566	1,316	1,293
Hawaii	0	0	0	0	0	0	0
Oregon	0	0	0	5	9	14	0
Washington	0	0	0	0	0	0	0
Other States	**0**	**0**	**0**	**0**	**0**	**0**	**93**
Federal Waters	**b**	**b**	**b**	**b**	**b**	**b**	**3,213**

a. Data-pertain only to dry gas and condensate wells. Data as of December 31.

b. "Federal Waters" is included in Texas, Louisiana, and California totals.

R – Revised. P – Preliminary.

Source: Preliminary numbers taken from *World Oil*, February, 1988. Revised numbers taken from U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

TABLE 3-19
NEW GAS WELL COMPLETIONS, BY STATE, 1970-1987[a]

Division and State	1970	1975	1980	1984	1985	1986[R]	1987[P]
United States	**4,031**	**8,169**	**17,132**	**14,962[b]**	**12,875[b]**	**7,515**	**4,967**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**255**	**964**	**1,634**	**2,014**	**1,777**	**1,068**	**403**
New Jersey	0	0	0	0	0	0	0
New York	17	362	368	450	312	192	65
Pennsylvania	238	602	1,266	1,564	1,465	876	338
East North Central	**750**	**835**	**2,795**	**1,692**	**1,208**	**582**	**327**
Illinois	6	5	14	47	38	23	13
Indiana	5	17	46	21	24	24	12
Michigan	18	34	52	70	42	67	84
Ohio	721	779	2,683	1,554	1,104	468	218
Wisconsin	0	0	0	0	0	0	0
West North Central	**111**	**501**	**681**	**437**	**512**	**368**	**318**
Iowa	0	0	0	0	0	0	0
Kansas	109	499	642	428	502	365	313
Minnesota	0	0	0	0	0	0	0
Missouri	0	1	2	0	2	0	0
Nebraska	2	1	3	5	1	0	0
North Dakota	0	0	14	3	4	1	1
South Dakota	0	0	20	1	3	2	2
South Atlantic	**707**	**595**	**1,545**	**1,695**	**1,250**	**863**	**490**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	0	1	0	0	0	0
Georgia	0	0	0	0	1	0	0
Maryland	0	0	0	0	0	0	0
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	0	26	17	56	84	132	8
West Virginia	707	569	1,527	1,639	1,165	731	482
East South Central	**141**	**242**	**581**	**711**	**683**	**390**	**213**
Alabama	5	34	64	161	116	60	51
Kentucky	110	128	191	367	415	234	99
Mississippi	16	32	69	50	58	33	34
Tennessee	10	48	257	133	94	63	29
West South Central	**1,685**	**3,872**	**7,627**	**6,698**	**5,720**	**3,298**	**2,599**
Arkansas	32	24	121	218	256	157	139
Louisiana	575	830	1,787	1,193	1,007	518	395
Oklahoma	295	667	2,146	1,806	1,483	1,048	753
Texas	783	2,351	3,573	3,481	2,974	1,575	1,312
Mountain	**326**	**1,108**	**2,179**	**1,243**	**1,195**	**849**	**548**
Arizona	0	0	0	0	0	0	0
Colorado	54	268	546	488	399	413	260
Idaho	0	0	0	0	0	0	0
Montana	48	265	226	105	83	94	60
Nevada	0	0	1	0	0	0	0
New Mexico	169	464	1,061	430	577	241	179
Utah	10	16	97	82	62	52	17
Wyoming	45	95	248	138	74	49	32
Pacific	**56**	**52**	**90**	**134**	**123**	**93**	**68**
Alaska	2	3	2	0	0	4	0
California	54	49	86	134	120	87	61
Hawaii	0	0	0	0	0	0	0
Oregon	0	0	2	0	3	2	7
Washington	0	0	0	0	0	0	0
Federal Waters	**0**	**0**	**0**	**278**	**206**	**4**	**1**

a. Data is published "as reported"; therefore, recent periods are incomplete and understate actual drilling levels. See detailed explanation at the beginning of this section.

b. Reflects API estimates. State totals do not add to U.S. total. See Footnote a.

R–Revised. P–Preliminary.

Source: American Petroleum Institute, *Well Completions and Footage Drilled in the U.S.* (Data for 1970, 1975 and 1980); *Quarterly Completion Report*, Fourth Quarter, 1986 (1984 Data); Fourth Quarter, 1985 (1983 Data); Second Quarter, 1987 (1985 and 1986 Data), Fourth Quarter, 1987 (1986 and 1987 data).

TABLE 3-20
NEW FIELD WILDCAT WELLS DRILLED AND PROPORTION SUCCESSFUL 1965-1987[a]

Year	Total Drilled	Dry	Productive	Percent Productive
1965	6,182	5,544	638	10.3
1970	4,829	4,348	481	10.0
1971	4,636	4,161	475	10.2
1972	5,011	4,454	557	11.1
1973	5,096	4,346	750	14.7
1974	5,946	5,084	862	14.5
1975	6,238	5,315	923	14.8
1976	5,856	4,871	985	16.8
1977	6,162	5,170	992	16.1
1978	6,731	5,603	1,128	16.8
1979	6,423	5,203	1,220	19.0
1980	7,332	5,973	1,359	18.5
1981	9,151	7,563	1,588	17.4
1982	7,386	6,061	1,325	17.9
1983	6,057	5,063	994	16.4
1984	6,528	5,545	983	15.1
1985	5,569	4,801	768	13.8
1986[R]	3,416	2,939	477	14.0
1987[P]	2,939	2,542	397	13.5

a. Data is published "as reported"; therefore, recent periods are incomplete and understate actual drilling levels. See detailed explanation at the beginning of this section.

R-Revised. P-Preliminary.

Source: American Petroleum Institute, *Quarterly Completion Report*, various issues.

TABLE 3-21
NEW WELL COMPLETIONS, BY TYPE OF WELL, 1965-1987[a]

Year	Total[b]	Oil	Gas	Dry	Service[c]
1965	39,510	18,761	4,724	16,025	1,922
1970	28,173	13,043	4,031	11,099	1,258
1971	26,268	11,903	3,983	10,382	1,365
1972	27,934	11,437	5,484	11,013	1,458
1973	27,692	10,251	6,975	10,466	908
1974	33,037	13,664	7,168	12,205	1,132
1975	38,884	16,979	8,169	13,736	1,612
1976	40,940	17,697	9,438	13,805	1,528
1977	45,855	18,700	12,119	15,036	1,320
1978	50,061	19,065	14,405	16,591	1,547
1979	51,890	20,689	15,166	16,035	1,424
1980	69,486	32,120	17,132	20,234	1,952
1981	89,234	42,520	19,742	26,972	2,223
1982	83,889	39,252	18,810	25,827	2,051
1983	75,738	37,396	14,505	23,837	1,917
1984	84,983	44,472	14,962	25,549	2,104
1985	70,708	36,374	12,875	21,459	1,627
1986[R]	37,105	17,771	7,515	11,819	633
1987[P]	26,140	12,129	4,967	9,044	431

a. See detailed explanation at the beginning of this section.

b. Includes Oil, Gas and Dry, but not service.

c. Excludes stratigraphic and core tests. Based on "as reported" data. Not included in Total.

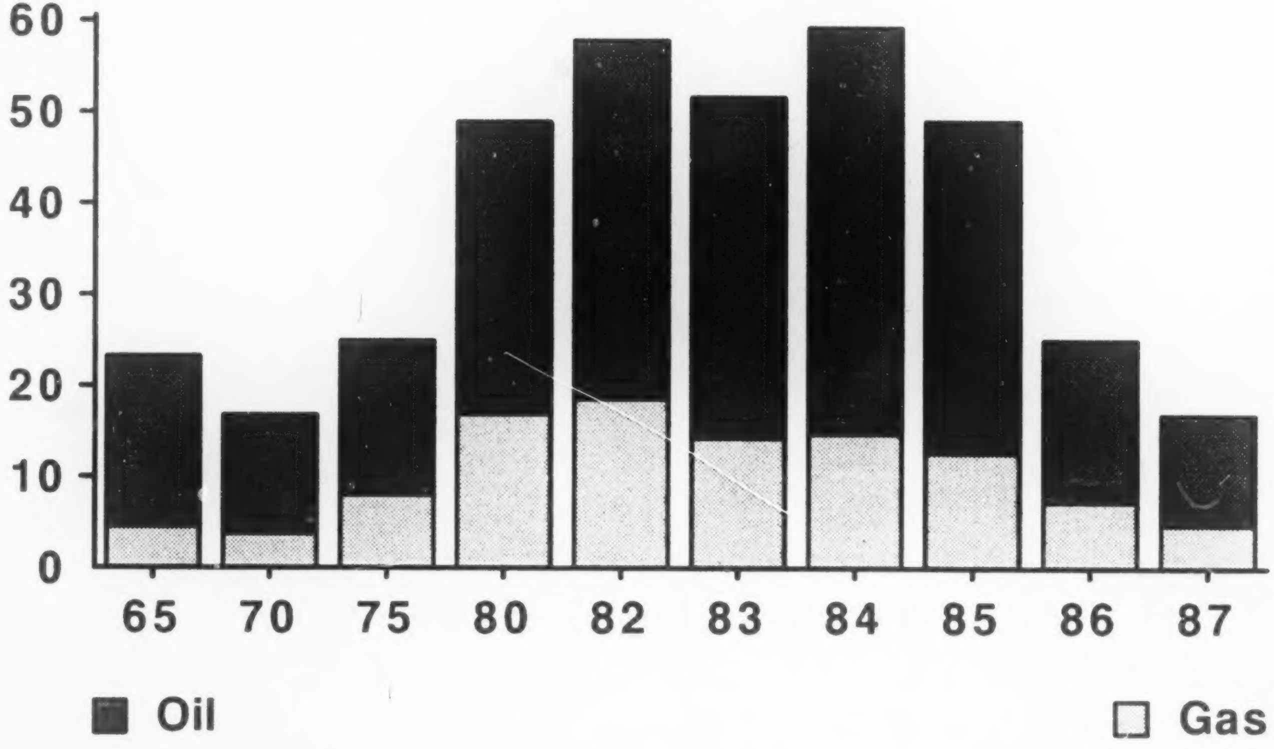
R-Revised. P-Preliminary.

Note: All data from 1982-1987 reflects API estimates except service.

Source: Oil and Gas Journal prior to 1968, American Petroleum Institute, *Quarterly Completion Report*, various issues.

CHART 3-2

TOTAL GAS AND OIL NEW WELL COMPLETIONS (THOUSANDS)



REFERENCE: TABLE 3-21

TABLE 3-22
NEW WELL COMPLETIONS, BY TYPE OF WELL AND STATE, 1987[a]

Division and State	Total[b]	Oil	Gas	Dry	Service
United States	**26,140**	**12,129**	**4,967**	**9,044**	**431**
New England	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**444**	**8**	**403**	**33**	**0**
New Jersey	0	0	0	0	0
New York	77	3	65	9	0
Pennsylvania	367	5	338	24	0
East North Central	**2,641**	**1,402**	**327**	**912**	**78**
Illinois	1,064	621	13	430	72
Indiana	247	92	12	143	3
Michigan	430	75	84	271	3
Ohio	900	614	218	68	0
Wisconsin	0	0	0	0	0
West North Central	**2,785**	**946**	**318**	**1,521**	**7**
Iowa	1	0	0	1	0
Kansas	2,480	843	313	1,324	4
Minnesota	0	0	0	0	0
Missouri	8	6	0	2	0
Nebraska	152	29	1	122	3
North Dakota	138	68	2	68	0
South Dakota	6	0	2	4	0
South Atlantic	**560**	**50**	**490**	**20**	**0**
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	9	2	0	7	0
Georgia	0	0	0	0	0
Maryland	1	0	0	1	0
North Carolina	1	0	0	1	0
South Carolina	0	0	0	0	0
Virginia	10	1	8	1	8
West Virginia	539	47	482	10	0
East South Central	**947**	**232**	**213**	**502**	**7**
Alabama	176	22	51	103	0
Kentucky	384	110	99	175	7
Mississippi	292	81	34	177	0
Tennessee	95	19	29	47	0
West South Central	**14,345**	**6,730**	**2,599**	**5,016**	**302**
Arkansas	353	57	139	157	0
Louisiana	1,973	774	395	804	0
Oklahoma	2,800	1,233	753	814	30
Texas	9,219	4,666	1,312	3,241	272
Mountain	**2,266**	**884**	**548**	**834**	**28**
Arizona	4	0	0	4	0
Colorado	683	194	260	229	4
Idaho	0	0	0	0	0
Montana	237	74	60	103	2
Nevada	14	2	0	12	0
New Mexico	658	336	179	143	14
Utah	89	38	17	34	0
Wyoming	581	240	32	309	8
Pacific	**2,090**	**1,855**	**68**	**167**	**9**
Alaska	67	62	0	5	1
California	2,012	1,793	61	158	8
Hawaii	0	0	0	0	0
Oregon	10	0	7	3	0
Washington	1	0	0	1	0
Federal Waters	**62**	**22**	**1**	**39**	**0**

a. Based on "as reported" data; therefore data understates actual levels of drilling activity. See detailed explanation at the beginning of this section.

b. Excludes service wells, stratigraphic and core tests.

Source: American Petroleum Institute, *Quarterly Completion Report*, Second Quarter 1988.

TABLE 3-23
HOLES DRILLED AND PROPORTION SUCCESSFUL, BY TYPE OF EXPLORATION HOLE
1965-1986

	Outposts-Extensions	New-Pool Wildcats	Deeper-Pool Tests	Shallower-Pool Tests	New-Field Wildcats	Total
1965						
Drilled	1,131	1,707	353	93	6,182	9,466
Dry	805	1,374	242	40	5,544	8,005
Productive	326	333	111	53	638	1,461
Percent Productive	28.8	19.5	31.4	57.0	10.3	15.4
1970						
Drilled	1,228	1,043	260	93	5,069	7,693
Dry	832	808	167	39	4,576	6,422
Productive	396	235	93	54	493	1,271
Percent Productive	32.2	22.5	35.8	58.1	9.7	16.5
1975						
Drilled	1,577	1,112	288	133	6,104	9,214
Dry	905	719	181	38	5,228	7,071
Productive	672	393	107	95	876	2,143
Percent Productive	42.6	35.3	37.2	71.4	14.4	23.3
1979						
Drilled	1,853	1,486	486	246	6,374	10,445
Dry	1,003	841	304	61	5,212	7,421
Productive	850	645	182	185	1,162	3,024
Percent Productive	45.9	43.4	37.5	75.2	18.2	29.0
1980						
Drilled	1,981	1,819	789	293	7,034	11,916
Dry	1,104	952	523	69	5,694	8,342
Productive	877	867	266	224	1,340	3,574
Percent Productive	44.3	47.7	33.7	76.4	19.1	30.0
1981						
Drilled	3,028	2,340	1,299	449	8,052	15,168
Dry	1,541	1,353	907	153	6,629	10,583
Productive	1,487	987	392	296	1,423	4,585
Percent Productive	49.1	42.2	30.2	65.9	17.7	30.2
1982						
Drilled	3,328	2,870	1,782	613	7,914	16,507
Dry	1,864	1,699	1,315	233	6,512	11,623
Productive	1,464	1,171	467	380	1,402	4,884
Percent Productive	44.0	40.8	26.2	62.0	17.7	29.6
1983						
Drilled	2,498	2,281	1,979	640	6,489	13,887
Dry	1,437	1,340	1,491	288	5,351	9,907
Productive	1,061	941	488	352	1,138	3,980
Percent Productive	42.5	41.3	24.7	55.0	17.5	28.7
1984						
Drilled	3,340	2,580	2,311	758	6,088	15,077
Dry	2,077	1,618	1,869	384	5,208	11,156
Productive	1,263	962	442	374	880	3,921
Percent Productive	37.8	37.3	19.1	49.3	14.5	26.0
1985						
Drilled	2,510	2,343	2,013	602	6,364	13,832
Dry	1,473	1,356	1,627	291	5,355	10,102
Productive	1,037	987	386	311	1,009	3,730
Percent Productive	41.3	42.1	19.2	51.7	15.9	27.0
1986						
Drilled	1,596	579	1,709	391	4,731	9,006
Dry	888	162	1,485	210	4,039	6,784
Productive	708	417	224	181	692	2,222
Percent Productive	44.4	72.0	13.1	46.3	14.6	24.7

Source: Committee on Statistics of Drilling, *American Association of Petroleum Geologists Bulletin*, 1986.

TABLE 3-24
EXPLORATORY WELLS AND DRY HOLES DRILLED, BY STATE AND TYPE OF WELL, 1987[a]

Division and State	Total Drilled	Dry Holes	Producers		
			Total	Oil	Gas
United States	**5,610**	**4,343**	**1,267**	**717**	**550**
New England	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**10**	**5**	**5**	**0**	**5**
New Jersey	0	0	0	0	0
New York	3	1	2	0	2
Pennsylvania	7	4	3	0	3
East North Central	**558**	**475**	**83**	**48**	**35**
Illinois	195	181	14	12	2
Indiana	108	85	23	20	3
Michigan	238	197	41	13	28
Ohio	17	12	5	3	2
Wisconsin	0	0	0	0	0
West North Central	**1,294**	**1,004**	**290**	**231**	**59**
Iowa	1	1	0	0	0
Kansas	1,105	845	260	202	58
Minnesota	0	0	0	0	0
Missouri	4	2	2	2	0
Nebraska	106	101	5	4	1
North Dakota	74	51	23	23	0
South Dakota	4	4	0	0	0
South Atlantic	**18**	**13**	**5**	**0**	**5**
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	4	4	0	0	0
Georgia	0	0	0	0	0
Maryland	1	1	0	0	0
North Carolina	1	1	0	0	0
South Carolina	0	0	0	0	0
Virginia	1	1	0	0	0
West Virginia	11	6	5	0	5
East South Central	**284**	**233**	**51**	**27**	**24**
Alabama	64	52	12	3	9
Kentucky	85	76	9	6	3
Mississippi	112	88	24	15	9
Tennessee	23	17	6	3	3
West South Central	**2,528**	**1,914**	**614**	**275**	**339**
Arkansas	77	59	18	7	11
Louisiana	311	258	53	18	35
Oklahoma	188	140	48	22	26
Texas	1,952	1,457	495	228	267
Mountain	**742**	**552**	**190**	**128**	**62**
Arizona	4	4	0	0	0
Colorado	195	157	38	24	14
Idaho	0	0	0	0	0
Montana	82	65	17	10	7
Nevada	12	11	1	1	0
New Mexico	139	62	77	47	30
Utah	34	23	11	8	3
Wyoming	276	230	46	38	8
Pacific	**144**	**116**	**28**	**7**	**21**
Alaska	3	3	0	0	0
California	134	109	25	7	18
Hawaii	0	0	0	0	0
Oregon	6	3	3	0	3
Washington	1	1	0	0	0
Federal Waters	**32**	**31**	**1**	**1**	**0**

a. See detailed explanation at the beginning of this section.

Source: American Petroleum Institute, *Quarterly Completion Report*, Second Quarter 1988.

TABLE 3-25
DRILLING OPERATIONS AND EXPENDITURES, BY TYPE OF WELL, 1985-1986[a]

	Total	Oil	Gas[b]	Dry
			1985	
Wells drilled	67,821	33,800	13,854	20,167
Footage drilled (000)	314,490	136,889	75,707	101,894
Expenditures (000)	$23,696,603	$ 9,141,070	$7,047,142	$7,508,391
Average depth per well (ft)	4,637	4,050	5,465	5,053
Average cost per well	$ 349,399	$ 270,446	$ 508,672	$ 372,311
Average cost per foot	$ 75.35	$ 66.78	$ 93.08	$ 73.69
			1986	
Wells drilled	37,173	18,198	7,351	11,624
Footage drilled (000)	176,289	75,847	41,324	59,118
Expenditures (000)	$13,552,403	$ 5,184,093	$3,843,883	$4,524,427
Average depth per well (ft)	4,742	4,168	5,622	5,086
Average cost per well	$ 364,577	$ 284,872	$ 522,906	$ 389,232
Average cost per foot	$ 76.88	$ 68.35	$ 93.02	$ 76.53

a. Includes all charges for drilling and equipping wells up to and including the "Christmas" trees, but excludes exploration, development and production costs and expenditures for service wells.

b. Includes condensate wells.

Source: American Petroleum Institute, *Joint Association Survey on Drilling Costs*, December 1987.

TABLE 3-26
OFFSHORE DRILLING OPERATIONS AND EXPENDITURES, BY TYPE OF WELL, 1985-1986[a]

	Total	Oil	Gas[b]	Dry
			1985	
Wells drilled	1,247	369	307	571
Footage drilled (000)	12,816	3,400	3,275	6,141
Expenditures (000)	$5,079,292	$1,265,697	$1,299,889	$2,513,706
Average depth per well (ft)	10,277	9,215	10,667	10,755
Average cost per well	$4,073,209	$3,430,073	$4,234,166	$4,402,287
Average cost per foot	$ 396.32	$ 372.26	$ 396.91	$ 409.33
			1986	
Wells drilled	898	333	207	358
Footage drilled (000)	9,408	3,139	2,300	3,969
Expenditures (000)	$3,596,314	$1,040,990	$ 941,245	$1,614,079
Average depth per well (ft)	10,476	9,426	11,112	11,086
Average cost per well	$4,004,805	$3,126,096	$4,547,079	$4,508,601
Average cost per foot	$ 382.27	$ 331.64	$ 409.22	$ 406.70

a. Includes all charges for drilling and equipping wells up to and including the "Christmas" trees, but excludes exploration, development and production costs and expenditures for service wells.

b. Includes condensate wells.

R–Revised.

Source: American Petroleum Institute, *Joint Association Survey on Drilling Costs*, December 1987.

TABLE 3-27
AVERAGE COST PER FOOT BY TYPE OF WELL, BY DEPTH CLASSES, 1982-1986[a]

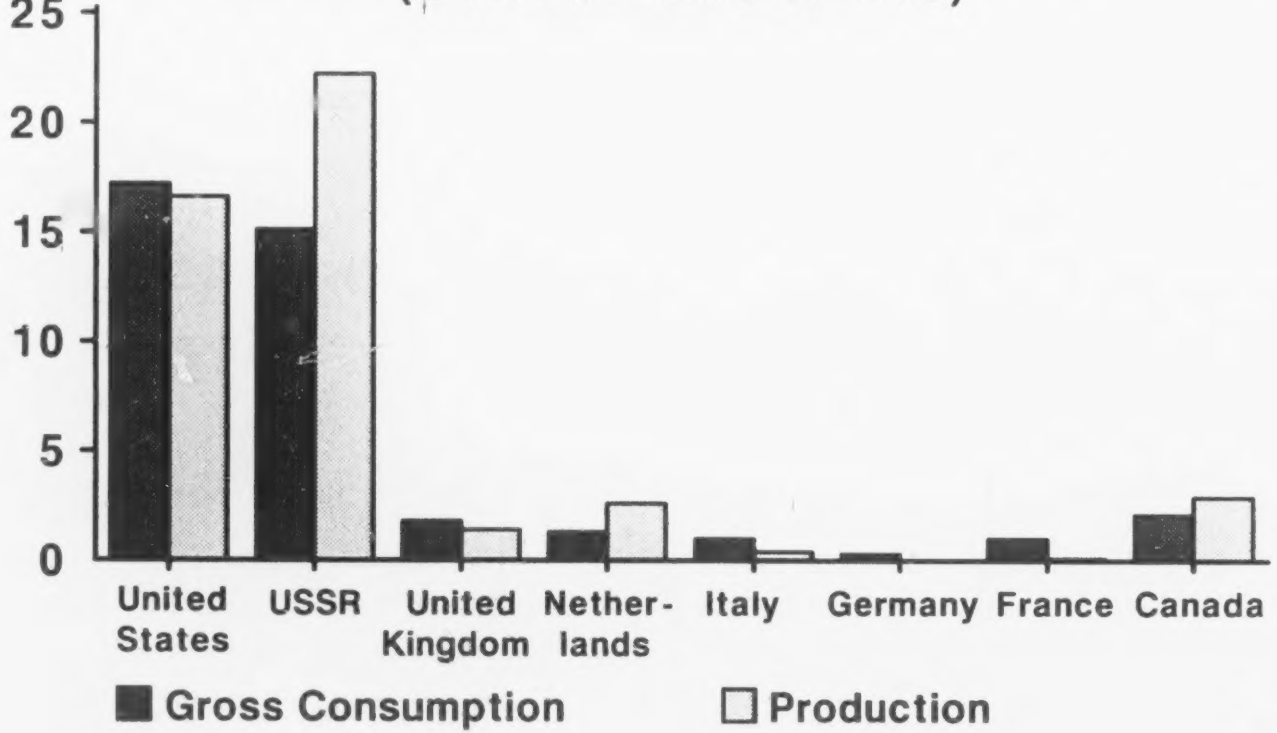
Depth Range (in feet)	Total	Oil	Gas	Dry
1982				
0- 1,249	$ 39.50	$ 42.35	$ 47.77	$ 29.75
1,250- 2,499	39.50	46.24	41.96	26.96
2,500- 3,749	42.60	49.18	47.33	28.64
3,750- 4,999	46.77	55.08	50.16	32.77
5,000- 7,499	65.76	74.39	71.19	50.52
7,500- 9,999	101.32	98.63	120.51	89.70
10,000-12,499	160.97	165.42	174.95	143.37
12,500-14,999	239.97	238.27	260.12	219.04
15,000-17,499	337.08	332.07	354.38	318.49
17,500-19,999	462.98	477.76	503.54	409.53
20,000 and over	607.72	423.23	586.21	638.86
1983				
0- 1,249	$ 37.13	$ 39.35	$ 44.63	$ 29.96
1,250- 2,499	38.07	44.71	40.89	24.60
2,500- 3,749	38.08	43.61	43.20	25.19
3,750- 4,999	41.01	50.52	40.01	28.54
5,000- 7,499	53.44	61.93	53.38	43.02
7,500- 9,999	81.37	82.91	86.27	74.99
10,000-12,499	127.31	131.51	146.48	104.95
12,500-14,999	211.85	216.01	220.35	202.20
15,000-17,499	295.25	340.40	302.32	275.03
17,500-19,999	412.40	365.65	413.40	416.48
20,000 and over	645.79	578.32	659.82	639.18
1984				
0- 1,249	$ 37.61	$ 41.49	$ 39.43	$ 24.90
1,250- 2,499	37.79	43.91	39.46	24.04
2,500- 3,749	38.73	45.75	40.28	24.70
3,750- 4,999	38.96	46.96	40.86	27.38
5,000- 7,499	50.91	60.26	51.17	37.97
7,500- 9,999	72.53	72.38	89.14	61.23
10,000-12,499	110.00	110.48	128.02	95.02
12,500-14,999	172.41	175.18	189.63	158.07
15,000-17,499	258.70	234.18	279.90	250.02
17,500-19,999	338.58	299.16	326.98	352.65
20,000 and over	574.81	447.54	545.20	625.53
1985				
0- 1,249	$ 35.39	$ 38.32	$ 36.38	$ 25.79
1,250- 2,499	38.81	44.40	41.28	24.64
2,500- 3,749	39.10	44.36	42.05	27.53
3,750- 4,999	38.62	45.71	40.14	28.09
5,000- 7,499	50.58	58.29	53.46	38.04
7,500- 9,999	76.85	76.13	90.81	68.99
10,000-12,499	113.68	103.56	127.28	113.25
12,500-14,999	171.90	157.41	204.18	155.54
15,000-17,499	276.97	285.93	299.27	258.17
17,500-19,999	323.87	390.31	316.85	317.55
20,000 and over	506.29	272.77	505.90	525.57
1986				
0- 1,249	$ 34.70	$ 39.47	$ 39.13	$ 21.30
1,250- 2,499	36.49	41.39	40.57	24.51
2,500- 3,749	37.31	43.27	40.36	24.64
3,750- 4,999	32.98	36.87	37.04	25.41
5,000- 7,499	46.36	53.14	47.45	37.61
7,500- 9,999	73.17	74.37	77.66	67.97
10,000-12,499	114.20	128.76	120.11	94.44
12,500-14,999	177.23	165.90	207.39	164.08
15,000-17,499	283.52	259.14	309.14	271.09
17,500-19,999	310.98	337.88	346.10	283.70
20,000 and over	596.27	478.83	640.53	597.67

[a] Includes all charges for drilling and equipping wells up to and including the "Christmas" trees but excludes exploration, development and production costs and expenditures for service wells.

Source: American Petroleum Institute, *Joint Association Survey on Drilling Costs,* December 1986.

CHART 3-3

NATURAL GAS PRODUCTION AND GROSS CONSUMPTION, 1986
(QUADRILLIONS OF BTU)



REFERENCE: TABLE 3-28

TABLE 3-28
SELECT WORLD NATURAL GAS STATISTICS
1986

Country	Production	Imports	Exports	Gross Consumption	Residential Consumers (000)	Miles of Pipeline (000)
	(Trillions of Btu)					
Austria	38.3	139.6	—	177.4	961	7.4
Belgium	0.9	283.6	10.1	259.8	1,913	20.9
Canada	2,982.1	9.3	775.4	2,196.5	3,326[a]	112.9[a]
Czechoslovakia	22.7	345.2	—	307.2[b]	2,435	22.1
Denmark	73.8	—	23.8	45.4	357[b]	2.7[b]
Finland	—	40.0	—	40.0	94[b]	0.6
France	156.0	960.9	11.9	1,073.0	8,624	82.4
German Democratic Republic	141.6	224.8	7.7	335.7	3,527	26.4
Federal Republic of Germany	440.9	1,231.7	39.0	1,634.6	9,100	113.4
Greece	4.3	—	—	4.3	6	.3
Hungary	220.8	152.9	0.7	371.7	1,250	11.0
Ireland	60.0	—	—	59.9	152	2.4
Italy	513.1	657.1	5.5	1,146.3	9,800	67.8
Luxembourg	—	13.3	—	13.3	59	.6
Netherlands	2,691.5[a]	69.7	1,334.3[a]	1,427.4	4,923[b]	55.3[b]
Norway	1,034.8	—	993.4	41.4	2[c]	0.1[c]
Poland	146.3	228.2	—	373.0	7,244	28.1
Spain	10.1[a]	94.3[a]	—	103.7[a]	1,502[a]	5.9[b]
Switzerland	0.6	57.7	1.0	57.2	482	6.3
USSR	22,338.9	—	—	15,165.7[d]	65,085	237.6
United Kingdom	1,519.9	428.5	—	1,918.0	16,527	147.0
United States	16,712.7	778.9	56.8	17,309.8	46,331[a]	1,025.2
Yugoslavia	72.0	128.0	—	200.0	425[b]	11.5[b]

a. 1985 data.
b. 1984 data.
c. 1983 data.
d. 1980 data.
Source: United Nations, *Annual Bulletin of Gas Statistics for Europe*, 1986.

TABLE 3-29
WORLD WELL COMPLETIONS
1985

Area	Oil	Gas	Dry	Service	Suspended	Total Wells	Total Footage
North America	40,108	13,917	21,835	1,682	44	77,607	346,072,879
South America	2,404	140	479	283	106	3,412	19,803,342
Far East	4,361	206	290	1,267	139	7,563[b]	49,843,900
Western Europe	415	283	295	50	119	1,162	9,440,667
Middle East	427	10	68	76	32	868[c]	5,817,560
Africa	326	41	212	30	49	658	5,458,452
Oceania	142	51	188	3	5	389	2,445,823
World Total[a]	48,183	14,648	23,367	3,391	494	91,659	438,882,623

a. No drilling data available for Eastern Europe, USSR, Iran and Iraq.
b. Total does not add due to inclusion of 1,300 total wells from China.
c. Total does not add due to inclusion of 50 total wells from Iran, 138 total wells from Syria, and 60 total wells from Iraq.
Source: *World Oil*, August 15, 1986.

WORLD WELL COMPLETIONS
1986

Area	Oil	Gas	Dry	Service	Suspended	Total Wells	Total Footage
North America	21,977	8,682	14,131	855	41	45,706	212,138,136
South America	1,906	57	404	290	310	2,967	15,233,977
Far East	669	167	249	180	91	8,386[b]	48,952,349
Western Europe	275	231	263	39	85	893	6,781,732
Middle East	436	20	84	53	53	861[c]	5,151,364
Africa	239	28	173	29	31	500	4,413,263
Oceania	43	34	119	1	17	214	1,394,120
World Total[a]	25,545	9,219	15,423	1,447	628	59,527	294,064,941

a. No drilling data available for Eastern Europe, USSR, Iran and Iraq.
b. Total does not add due to inclusion of 7,030 total wells from China.
c. Total does not add due to inclusion of 54 total wells from Iran, 108 total wells from Syria, and 53 total wells from Iraq.
Source: *World Oil*, August, 1987.

WORLD WELL COMPLETIONS
1987[a]

Area	Oil	Gas	Dry	Service	Suspended	Total Wells	Total Footage
North America	19,917	9,695	13,007	865	17	43,522[b]	194,891,712
South America	1,984	89	412	105	163	2,753	15,510,799
Far East	5,055	646	203	1,341	97	8,503[c]	49,520,731
Western Europe	295	220	221	46	97	879	7,242,765
Middle East	290	22	64	33	51	667[d]	4,854,022
Africa	237	31	146	41	20	475	3,975,081
Oceana	82	50	160	0	16	308	2,114,456
World Total	27,860	10,753	14,213	2,431	461	57,107	278,109,566

a. No drilling data available for Eastern Europe, USSR, Iraq, Syria, Yemen and Cuba.
b. Total does not add due to inclusion of 21 total wells from Cuba.
c. Total does not add due to inclusion of 1,161 total wells from China.
d. Total does not add due to inclusion of 52 total wells from Iraq, 100 total wells from Syria and 55 total wells from Yemen.
Source: *World Oil*, August, 1988.

SECTION 4
UNDERGROUND GAS STORAGE

	1987	% Change 87/86
Number of Pools	391	−1.3
Est. Ultimate Capacity Millions of cubic feet)	7,806,574	+0.2
Input to Storage (Millions of cubic feet)	1,888,385	−1.6
Output from Storage (Millions of cubic feet)	1,890,920	+1.2
Maximum Day Output (Millions of cubic feet)	36,656	−4.8

TABLE 4-1
NUMBER OF UNDERGROUND STORAGE POOLS AND ULTIMATE CAPACITY IN THE UNITED STATES, 1965-1987

Year	Number of Pools	Number of States	Est. Ultimate Capacity (Billions of Cubic Feet)
1965	293	24	4,086
1966	303	24	4,421
1967	308	25	4,520
1968	315	26	4,783
1969	320	26	4,927
1970	325	26	5,178
1971	333	26	5,575
1972	348	26	6,040
1973	360	26	6,279
1974	367	26	6,360
1975	376	26	6,644
1976	386	26	6,927
1977	385	26	7,223
1978	388	26	7,330
1979	399	26	7,437
1980	401	26	7,488
1981	393	26	7,581
1982	404	26	7,727
1983	419	26	7,755
1984	412	26	7,783
1985	400	26	7,731
1986	396	26	7,792
1987	391	26	7,807

Source: A.G.A. *The Underground Storage of Gas in the United States and Canada*—1987 Update.

UNDERGROUND STORAGE

TABLE 4-2
NUMBER OF AQUIFER POOLS AND ULTIMATE CAPACITY IN THE UNITED STATES, 1965–1987[a]

Year	Number of Pools	Number of States	Est. Ultimate Capacity (Billions of Cubic Feet)
1965	37	9	643
1970	43	9	968
1971	44	8	1,056
1972	46	9	1,278
1973	49	10	1,399
1974	51	10	1,408
1975	52	10	1,459
1976	52	10	1,484
1977	52	10	1,578
1978	53	10	1,593
1979	56	10	1,601
1980	57	10	1,449
1981	57	10	1,423
1982	56	10	1,432
1983	56	10	1,421
1984	54	10	1,472
1985	52	10	1,401
1986	51	10	1,404
1987	48	10	1,386

a. These data are included in Table 4-1.
Source: Same as Table 4-1.

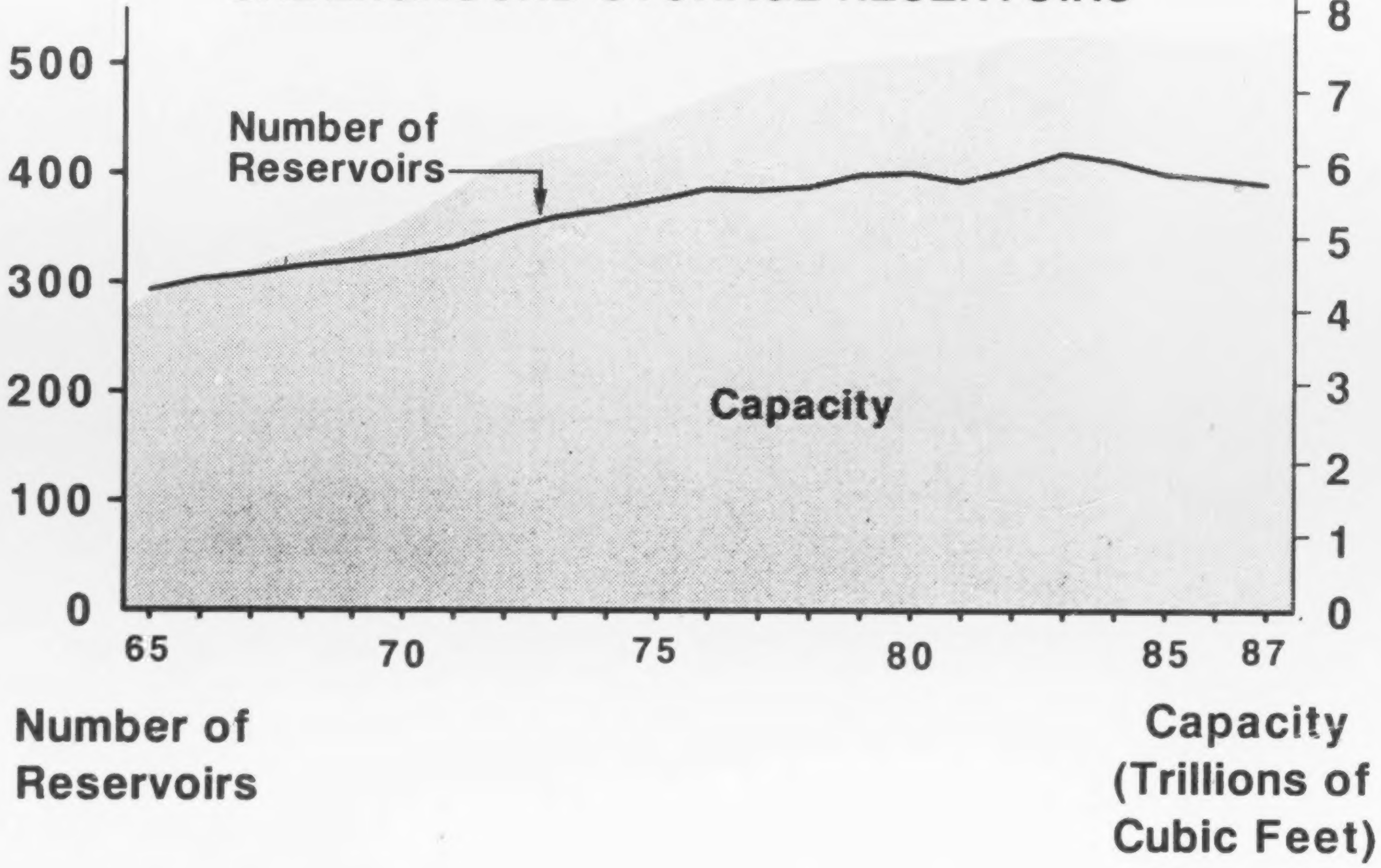
TABLE 4-3
LIQUEFIED NATURAL GAS STORAGE OPERATIONS IN THE UNITED STATES AS OF DECEMBER 31, 1987[a]

	Presently Operating	Proposed or Pending Operation
Complete Plants		
Storage Capacity—MMcf	63,702	0
Gross Liquefaction Capacity—MMcf/day	334	0
Sendout Capacity—MMcf/day	9,837	0
Number of Facilities	57	0
Satellite Plants		
Storage Capacity—MMcf	7,162	0
Sendout Capacity—MMcf/day	922	0
Number of Facilities	36	0
Import Terminals[b]		
Storage Capacity—MMcf	5,250	15,571
Sendout Capacity—MMcf/day	385	2,576
Number of Facilities	2	3

a. Not underground storage.
b. Of those presently operating, Algonquin terminal has been utilized for domestic storage since 1973.
Source: Institute of Gas Technology.

CHART 4-1

NUMBER AND CAPACITY OF EXISTING UNDERGROUND STORAGE RESERVOIRS



REFERENCE: TABLE 4-1

UNDERGROUND STORAGE

TABLE 4-4
INPUTS, OUTPUTS, AND GAS IN UNDERGROUND STORAGE, BY STATE, 1987

(Millions of Cubic Feet)

	Year Ending December 31, 1987					
Division and State	Input to Storage	Output from Storage	Native Gas	Stored Gas	Maximum Stored Gas	Maximum Day Output
United States	**1,888,385**	**1,890,920**	**1,113,492**	**5,161,346**	**5,665,084**	**36,656**
New England	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**438,565**	**441,894**	**43,330**	**719,036**	**795,723**	**3,758**
New Jersey	0	0	0	0	0	0
New York	44,246	46,112	15,096	133,493	146,982	363
Pennsylvania	394,319	395,782	28,234	585,543	648,741	3,395
East North Central	**527,772**	**516,775**	**350,420**	**1,837,420**	**1,989,482**	**11,021**
Illinois	122,445	119,343	11,259	803,409	831,814	2,910
Indiana	16,037	17,970	19,298	84,500	90,234	407
Michigan	245,508	236,684	237,516	552,918	629,782	5,260
Ohio	143,782	142,778	82,347	396,593	437,652	2,444
Wisconsin	0	0	0	0	0	0
West North Central	**135,843**	**104,890**	**53,738**	**518,277**	**540,445**	**2,382**
Iowa	45,100	41,796	0	247,289	261,431	813
Kansas	79,625	54,233	29,946	173,712	180,370	1,044
Minnesota	476	369	0	6,683	6,706	52
Missouri	4,407	3,927	0	29,286	29,299	360
Nebraska	6,235	4,565	23,792	61,307	62,639	113
North Dakota	0	0	0	0	0	0
South Dakota	0	0	0	0	0	0
South Atlantic	**131,573**	**135,817**	**65,474**	**448,301**	**475,138**	**2,648**
Delaware	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0
Florida	0	0	0	0	0	0
Georgia	0	0	0	0	0	0
Maryland	10,574	11,096	32,456	25,331	28,976	300
North Carolina	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0
Virginia	0	0	0	0	0	0
West Virginia	120,999	124,721	33,018	422,970	446,162	2,348
East South Central	**83,843**	**78,438**	**108,105**	**176,243**	**196,493**	**1,595**
Alabama	0	0	0	0	0	0
Kentucky	39,747	41,748	80,782	106,003	121,092	743
Mississippi	44,096	36,690	27,323	70,240	75,401	852
Tennessee	0	0	0	0	0	0
West South Central	**376,259**	**387,844**	**184,097**	**854,643**	**971,991**	**9,240**
Arkansas	401	465	22,000	12,323	12,625	100
Louisiana	185,152	204,126	72,011	339,021	400,541	3,406
Oklahoma	82,767	75,460	22,715	283,974	309,450	1,700
Texas	107,939	107,793	67,371	219,325	249,375	4,034
Mountain	**65,030**	**66,314**	**156,635**	**368,301**	**394,191**	**1,171**
Arizona	0	0	0	0	0	0
Colorado	24,615	26,051	25,819	52,355	61,162	561
Idaho	0	0	0	0	0	0
Montana	22,493	8,597	94,370	235,543	236,997	169
Nevada	0	0	0	0	0	0
New Mexico	15,180	16,269	10,600	26,161	29,039	256
Utah	580	500	0	3,737	3,738	24
Wyoming	2,162	14,897	25,846	50,505	63,255	161
Pacific	**129,500**	**158,948**	**151,693**	**239,125**	**301,621**	**4,841**
Alaska	0	0	0	0	0	0
California	121,346	149,867	151,693	206,069	267,638	4,562
Hawaii	0	0	0	0	0	0
Oregon	0	0	0	0	0	0
Washington	8,154	9,081	0	33,056	33,983	279

Source: Same as Table 4-1.

TABLE 4-5
NUMBER OF POOLS, WELLS, COMPRESSOR STATIONS, AND HORSEPOWER IN UNDERGROUND STORAGE FIELDS, BY STATE, 1985–1987

	Number of Pools			Number of Active Wells		
Division and State	1985	1986	1987	1985	1986	1987
(1) **United States**	**400**	**396**	**391**	**18,330**	**18,320**	**18,216**
(2) **New England**	**0**	**0**	**0**	**0**	**0**	**0**
(3) **Middle Atlantic**	**86**	**80**	**80**	**3,190**	**3,197**	**3,144**
(4) New Jersey	0	0	0	0	0	0
(5) New York	22	21	21	1,003	1,009	968
(6) Pennsylvania	64	59	59	2,187	2,188	2,176
(7) **East North Central**	**139**	**138**	**133**	**8,945**	**8,938**	**8,807**
(8) Illinois	34	33	31	1,734	1,739	1,697
(9) Indiana	28	29	28	934	941	924
(10) Michigan	54	53	52	2,982	2,963	2,955
(11) Ohio	23	23	22	3,295	3,295	3,231
(12) Wisconsin	0	0	0	0	0	0
(13) **West North Central**	**29**	**29**	**30**	**1,420**	**1,422**	**1,440**
(14) Iowa	8	8	8	434	434	434
(15) Kansas	17	17	18	789	789	789
(16) Minnesota	1	1	1	61	63	66
(17) Missouri	1	1	1	82	82	82
(18) Nebraska	2	2	2	54	54	69
(19) North Dakota	0	0	0	0	0	0
(20) South Dakota	0	0	0	0	0	0
(21) **South Atlantic**	**38**	**39**	**38**	**1,665**	**1,664**	**1,663**
(22) Delaware	0	0	0	0	0	0
(23) District of Columbia	0	0	0	0	0	0
(24) Florida	0	0	0	0	0	0
(25) Georgia	0	0	0	0	0	0
(26) Maryland	1	1	1	82	82	82
(27) North Carolina	0	0	0	0	0	0
(28) South Carolina	0	0	0	0	0	0
(29) Virginia	0	0	0	0	0	0
(30) West Virginia	37	38	37	1,583	1,582	1,581
(31) **East South Central**	**25**	**24**	**25**	**1,100**	**1,099**	**1,107**
(32) Alabama	0	0	0	0	0	0
(33) Kentucky	21	20	21	999	998	1,006
(34) Mississippi	4	4	4	101	101	101
(35) Tennessee	0	0	0	0	0	0
(36) **West South Central**	**45**	**46**	**44**	**967**	**956**	**1,016**
(37) Arkansas	4	4	5	12	12	12
(38) Louisiana	8	9	8	349	348	380
(39) Oklahoma	13	13	12	301	291	289
(40) Texas	20	20	19	305	305	335
(41) **Mountain**	**27**	**29**	**30**	**533**	**535**	**536**
(42) Arizona	0	0	0	0	0	0
(43) Colorado	9	9	10	200	200	196
(44) Idaho	0	0	0	0	0	0
(45) Montana	5	5	5	235	239	242
(46) Nevada	0	0	0	0	0	0
(47) New Mexico	3	3	3	45	43	43
(48) Utah	2	2	2	19	19	19
(49) Wyoming	8	10	10	34	34	36
(50) **Pacific**	**11**	**11**	**11**	**510**	**509**	**503**
(51) Alaska	0	0	0	0	0	0
(52) California	9	9	9	433	432	426
(53) Hawaii	0	0	0	0	0	0
(54) Oregon	0	0	0	0	0	0
(55) Washington	2	2	2	77	77	77

Source: Same as Table 4-1.

TABLE 4-5 (Continued)
NUMBER OF POOLS, WELLS, COMPRESSOR STATIONS, AND HORSEPOWER IN UNDERGROUND STORAGE FIELDS, BY STATE, 1985–1987

Number of Compressor Stations			Total HP Installed in Compressor Stations			
1985	1986	1987	1985	1986	1987	
281	**274**	**283**	**1,682,492**	**1,675,512**	**1,668,885**	(1)
0	**0**	**0**	**0**	**0**	**0**	(2)
47	**49**	**46**	**225,755**	**234,745**	**235,480**	(3)
0	0	0	0	0	0	(4)
13	14	12	36,035	39,435	28,110	(5)
34	35	34	189,720	195,310	207,370	(6)
92	**86**	**88**	**671,660**	**656,840**	**684,600**	(7)
28	27	29	213,290	199,490	220,170	(8)
16	15	14	19,345	19,345	19,145	(9)
29	25	27	331,170	330,150	338,355	(10)
19	19	18	107,855	107,855	106,930	(11)
0	0	0	0	0	0	(12)
23	**23**	**22**	**94,050**	**94,050**	**87,190**	(13)
4	4	3	37,040	37,040	30,040	(14)
15	15	15	35,210	35,210	35,210	(15)
1	1	1	2,400	2,400	2,400	(16)
1	1	1	8,850	8,850	8,850	(17)
2	2	2	10,550	10,550	10,690	(18)
0	0	0	0	0	0	(19)
0	0	0	0	0	0	(20)
20	**17**	**17**	**89,610**	**66,010**	**66,010**	(21)
0	0	0	0	0	0	(22)
0	0	0	0	0	0	(23)
0	0	0	0	0	0	(24)
0	0	0	0	0	0	(25)
1	1	1	11,000	11,000	11,000	(26)
0	0	0	0	0	0	(27)
0	0	0	0	0	0	(28)
0	0	0	0	0	0	(29)
19	16	16	78,610	55,010	55,010	(30)
17	**17**	**33**	**71,250**	**71,250**	**71,790**	(31)
0	0	0	0	0	0	(32)
14	14	30	35,750	35,750	36,290	(33)
3	3	3	35,500	35,500	35,500	(34)
0	0	0	0	0	0	(35)
43	**45**	**40**	**318,483**	**339,293**	**309,663**	(36)
3	3	3	1,800	2,400	2,500	(37)
7	8	7	137,040	158,040	129,100	(38)
11	9	9	79,210	78,510	78,510	(39)
22	25	21	100,433	100,343	99,553	(40)
28	**26**	**26**	**83,754**	**82,244**	**83,072**	(41)
0	0	0	0	0	0	(42)
8	8	8	34,500	34,500	34,628	(43)
0	0	0	0	0	0	(44)
6	6	6	24,235	24,225	24,225	(45)
0	0	0	0	0	0	(46)
5	3	3	12,680	11,180	11,180	(47)
2	2	2	1,200	1,200	1,900	(48)
7	7	7	11,139	11,139	11,139	(49)
11	**11**	**11**	**127,930**	**131,080**	**131,080**	(50)
0	0	0	0	0	0	(51)
10	10	10	115,430	118,580	118,580	(52)
0	0	0	0	0	0	(53)
0	0	0	0	0	0	(54)
1	1	1	12,500	12,500	12,500	(55)

TABLE 4-6
ULTIMATE CAPACITY OF EXISTING RESERVOIRS, BY STATE, 1987

(Millions of Cubic Feet)

Division and State	Cushion Gas			Working Gas	Ultimate Reservoir Capacity*
	Native	Injected	Total		
United States	**1,113,492**	**2,440,399**	**3,553,891**	**2,740,941**	**7,806,574**
New England	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**43,330**	**389,455**	**432,785**	**329,581**	**917,298**
New Jersey	0	0	0	0	0
New York	15,096	79,838	94,934	53,655	180,199
Pennsylvania	28,234	309,617	337,851	275,926	737,099
East North Central	**350,420**	**1,005,293**	**1,355,713**	**843,850**	**2,650,175**
Illinois	11,259	543,173	554,432	260,375	888,273
Indiana	19,298	56,209	75,507	28,291	163,345
Michigan	237,516	160,259	397,775	404,243	1,005,285
Ohio	82,347	245,652	327,999	150,941	593,272
Wisconsin	0	0	0	0	0
West North Central	**53,738**	**233,250**	**286,988**	**285,027**	**757,855**
Iowa	0	117,751	117,751	129,538	354,500
Kansas	29,946	95,615	125,561	78,098	245,043
Minnesota	0	4,605	4,605	2,077	20,000
Missouri	0	11,759	11,759	17,527	45,000
Nebraska	23,792	3,520	27,312	57,787	93,312
North Dakota	0	0	0	0	0
South Dakota	0	0	0	0	0
South Atlantic	**65,474**	**250,886**	**316,360**	**197,415**	**567,955**
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Maryland	32,456	11,946	44,402	13,385	64,770
North Carolina	0	0	0	0	0
South Carolina	0	0	0	0	0
Virginia	0	0	0	0	0
West Virginia	33,018	238,940	271,958	184,030	503,185
East South Central	**108,105**	**39,855**	**147,959**	**136,880**	**313,402**
Alabama	0	0	0	0	0
Kentucky	80,782	21,088	101,869	85,407	205,060
Mississippi	27,323	18,767	46,090	51,473	108,342
Tennessee	0	0	0	0	0
West South Central	**184,097**	**349,040**	**533,137**	**513,312**	**1,389,550**
Arkansas	22,000	0	22,000	12,323	38,000
Lousiana	72,011	190,835	262,847	148,185	561,625
Oklahoma	22,715	128,199	150,914	155,775	370,480
Texas	67,371	30,006	97,376	197,029	419,445
Mountain	**156,635**	**60,570**	**217,206**	**307,730**	**669,225**
Arizona	0	0	0	0	0
Colorado	25,819	20,907	46,726	31,448	92,590
Idaho	0	0	0	0	0
Montana	94,370	15,200	109,570	220,343	373,960
Nevada	0	0	0	0	0
New Mexico	10,600	12,827	23,428	13,333	91,353
Utah	0	2,818	2,818	919	5,389
Wyoming	25,846	8,818	34,664	41,687	105,933
Pacific	**151,693**	**112,050**	**263,743**	**127,146**	**541,114**
Alaska	0	0	0	0	0
California	151,693	90,750	242,443	115,390	506,086
Hawaii	0	0	0	0	0
Oregon	0	0	0	0	0
Washington	0	21,300	21,300	11,756	35,028

* In some states or regions, the difference between the sum of the components and Ultimate Reservoir Capacity represents presently unused capacity

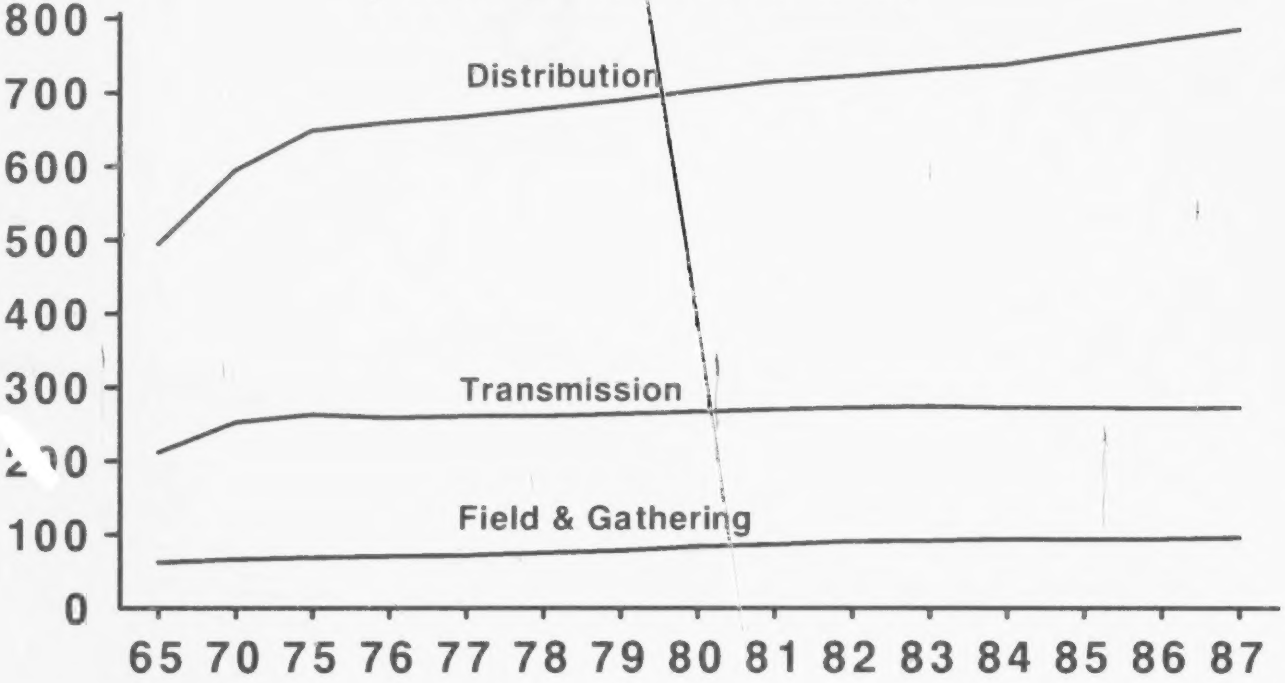
Source: Same as Table 4-1

SECTION 5
DISTRIBUTION AND TRANSMISSION

	1987	% Change 87/86
Miles of Pipeline		
(Thousands)		
Total	1,151.2	+ 1.5
Field & Gathering	95.5	+ 1.8
Transmission	271.9	+ 0.3
Distribution	783.8	+ 1.9
Miles Installed		
(Thousands)	18.9	+ 1.4

CHART 5-1

GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN (THOUSANDS OF MILES)



REFERENCE: TABLE 5-1

DISTRIBUTION AND TRANSMISSION

TABLE 5-1
GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN, BY TYPE, 1965-1987[a]

(Thousands)

Year	Total	Field and Gathering	Transmission Pipeline[b]	Distribution Main
1965	767.5	61.7	211.3	494.5
1966	799.6	63.0	217.0	519.6
1967	828.3	63.7	225.4	539.2
1968	861.6	64.4	234.5	562.7
1969	891.6	64.9	248.1	578.6
1970	913.3	66.3	252.2	594.8
1971	931.4	66.2	254.8	610.4
1972	948.1	66.9	258.1	623.1
1973	962.9	65.9	263.1	633.8
1974	974.1	66.4	262.2	645.6
1975	979.3	68.5	262.6	648.2
1976	987.7	70.3	258.2	659.1
1977	998.9	71.5	260.5	666.9
1978	1,013.0	74.9	260.6	677.5
1979	1,029.8	77.8	263.5	688.5
1980	1,051.8	83.5	266.5	701.8
1981	1,069.8	86.2	269.5	714.1
1982	1,083.4	90.5	271.7	721.2
1983	1,095.1	91.9	273.5	729.7
1984	1,102.4	93.7	271.9	736.8
1985[R]	1.118.9	94.3	271.2	753.4
1986	1,134.1	93.8	271.0	769.3
1987	1,151.2	95.5	271.9	783.8
Steel	939.2	94.3	268.7	576.2
Plastic[c]	155.7	1.1	3.1	151.5
Other	56.3	.1	.1	56.1

a. Excludes service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of each year.

b. Includes 5.0 thousand miles of Underground Storage pipe in 1975, 5.3 thousand miles in 1976, 5.2 thousand miles in 1977, 6.0 thousand miles in 1978, 5.7 thousand miles in 1979, 6.2 thousand miles in 1980, 7.8 thousand miles in 1981, 5.5 thousand miles in 1982, 5.9 thousand miles in 1983 and 1984, 6.0 thousand miles in 1985, 1986 and 1987, some of which was formerly included in Field and Gathering pipe.

c. Includes fiberglass.

R–Revised.

TABLE 5-2
GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN, BY STATE, 1965-1987[a]

Division and State	1965	1970	1975	1980	1985R	1986R	1987
United States	**767,520**	**913,267**	**979,263**	**1,051,774**	**1,118,875**	**1,134,110**	**1,151,159**
New England	**22,090**	**25,686**	**26,580**	**27,794**	**28,476**	**28,802**	**29,218**
Connecticut	4,960	5,728	5,991	6,710	6,550	6,612	6,658
Maine	390	705	461	395	411	415	376
Massachusetts	13,740	15,609	16,452	16,719	17,359	17,565	17,784
New Hampshire	800	1,041	1,093	1,163	1,283	1,293	1,417
Rhode Island	1,990	2,299	2,248	2,403	2,463	2,490	2,543
Vermont	210	304	335	404	410	427	440
Middle Atlantic	**102,580**	**111,644**	**113,993**	**116,439**	**121,682**	**122,872**	**123,837**
New Jersey	18,320	21,052	22,077	22,838	24,598	25,187	25,868
New York	36,580	39,955	40,535	41,394	42,334	42,578	43,104
Pennsylvania	47,680	50,637	51,381	52,207	54,750	55,107	54,865
East North Central	**147,640**	**178,268**	**190,172**	**200,361**	**206,889**	**209,076**	**211,702**
Illinois	38,750	46,683	50,252	53,375	54,541	54,960	55,381
Indiana	20,240	25,264	27,267	28,227	30,608	31,319	32,179
Michigan	30,370	37,699	40,203	44,100	44,694	45,130	45,516
Ohio	44,690	49,393	51,505	52,667	54,110	54,419	55,032
Wisconsin	13,590	19,229	20,945	21,992	22,936	23,248	23,594
West North Central	**82,250**	**99,536**	**106,134**	**112,901**	**115,855**	**118,070**	**119,385**
Iowa	13,630	16,654	17,273	17,892	18,254	18,282	18,473
Kansas	28,780	32,802	34,280	36,893	37,093	38,136	38,297
Minnesota	10,680	14,162	15,264	16,720	18,259	19,138	19,479
Missouri	15,150	18,654	20,897	21,854	21,875	22,034	22,545
Nebraska	10,300	12,627	13,333	14,079	14,381	14,436	14,456
North Dakota	1,560	2,332	2,533	2,854	3,208	3,231	3,253
South Dakota	2,150	2,305	2,554	2,609	2,785	2,813	2,882
South Atlantic	**74,180**	**92,738**	**100,496**	**103,960**	**112,722**	**114,677**	**117,374**
Delaware	1,160	1,270	1,322	1,336	1,428	1,455	1,496
District of Columbia	1,150	1,164	1,163	1,157	1,161	1,163	1,165
Florida	8,330	11,435	13,100	12,902	14,974	15,178	15,501
Georgia	14,600	19,549	22,679	24,676	27,190	28,011	28,823
Maryland	6,710	7,986	8,534	8,704	8,888	8,974	9,065
North Carolina	7,080	10,605	11,100	11,842	13,298	13,647	14,020
South Carolina	6,090	8,514	9,667	9,825	11,092	11,140	11,521
Virginia	8,190	10,451	10,944	11,226	12,315	12,959	13,606
West Virginia	20,870	21,764	21,987	22,292	22,376	22,150	22,177
East South Central	**54,390**	**65,441**	**70,345**	**73,807**	**78.485**	79,255	**81.031**
Alabama	13,860	16,607	17,832	19,556	20,779	21,120	21,438
Kentucky	15,470	18,295	19,816	19,981	20,991	20,989	21,231
Mississippi	13,460	16,403	17,056	17,911	18,666	18,820	18,926
Tennessee	11,600	14,136	15,641	16,359	18,049	18,326	19,436
West South Central	**150,260**	**182,752**	**194,820**	**216,394**	**237,776**	**242,607**	**246,590**
Arkansas	13,060	16,429	17,474	18,312	20,390	20,483	20,657
Louisiana	30,310	36,921	38,855	41,689	44,784	45,120	47,599
Oklahoma	23,850	28,532	32,798	37,132	42,594	42,483	42,452
Texas	83,040	100,870	105,693	119,261	130,008	134,521	135,882
Mountain	**59,000**	**71,848**	**83,184**	**97,391**	**107,410**	**107,423**	**108,898**
Arizona	11,120	13,379	15,197	16,669	17,341	17,573	17,772
Colorado	12,240	15,870	19,192	23,108	26,837	26,681	26,376
Idaho	2,770	3,226	3,785	4,177	4,589	4,701	4,665
Montana	5,970	6,324	7,435	8,822	8,965	9,040	9,232
Nevada	1,940	2,470	2,945	3,554	3,933	4,107	4,219
New Mexico	15,410	19,050	21,657	24,581	26,684	26,251	26,359
Utah	4,940	5,609	6,577	7,846	9,050	9,066	10,144
Wyoming	4,610	5,920	6,396	8,634	10,011	10,004	10,131
Pacific	**75,130**	**85,354**	**93,539**	**102,727**	**109,580**	**111,328**	**113,124**
Alaska	250	667	868	1,186	1,511	1,511	1,917
California	60,650	66,328	72,493	79,625	84,688	86,064	87,006
Hawaii	490	530	581	587	590	598	604
Oregon	6,360	8,014	8,838	9,709	10,390	10,585	10,670
Washington	7,380	9,815	10,759	11,620	12,401	12,570	12,927

[a] Includes field, gathering, underground storage, transmission and distribution main but excludes service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of year.

R–Revised.

TABLE 5-3
GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN, BY STATE AND TYPE OF MAIN, 1987[a]

Division and State	Total	Field and Gathering	Transmission Pipeline[b]	Distribution Main
United States	**1,151,159**	**95,469**	**271,894**	**783,796**
New England	**29,218**	**0**	**1,705**	**27,513**
Connecticut	6,658	0	506	6,152
Maine	376	0	29	347
Massachusetts	17,784	0	880	16,904
New Hampshire	1,417	0	177	1,240
Rhode Island	2,543	0	58	2,485
Vermont	440	0	55	385
Middle Atlantic	**123,837**	**6,912**	**18,005**	**98,920**
New Jersey	25,868	0	1,529	24,339
New York	43,104	501	3,574	39,029
Pennsylvania	54,865	6,411	12,902	35,552
East North Central	**211,702**	**4,491**	**35,334**	**171,877**
Illinois	55,381	79	9,263	46,039
Indiana	32,179	216	5,681	26,282
Michigan	45,516	144	7,141	38,231
Ohio	55,032	4,052	10,023	40,957
Wisconsin	23,594	0	3,226	20,368
West North Central	**119,385**	**9,201**	**38,697**	**71,487**
Iowa	18,473	74	5,837	12,562
Kansas	38,297	8,344	14,986	14,467
Minnesota	19,479	0	4,238	15,241
Missouri	22,545	25	4,011	18,509
Nebraska	14,456	46	7,516	6,894
North Dakota	3,253	197	1,145	1,911
South Dakota	2,882	15	964	1,903
South Atlantic	**117,374**	**8,466**	**21,564**	**87,344**
Delaware	1,496	0	191	1,305
District of Columbia	1,165	0	24	1,141
Florida	15,501	0	2,987	12,514
Georgia	28,823	0	5,054	23,769
Maryland	9,065	23	810	8,232
North Carolina	14,020	0	2,357	11,663
South Carolina	11,521	0	2,320	9,201
Virginia	13,606	132	2,527	10,947
West Virginia	22,177	8,311	5,294	8,572
East South Central	**81,031**	**3,889**	**27,200**	**49,942**
Alabama	21,438	7	5,379	16,052
Kentucky	21,231	3,654	7,274	10,303
Mississippi	18,926	228	9,648	9,050
Tennessee	19,436	0	4,899	14,537
West South Central	**246,590**	**40,406**	**89,459**	**116,725**
Arkansas	20,657	1,364	6,728	12,565
Louisiana	47,599	4,798	24,775	18,026
Oklahoma	42,452	11,893	12,808	17,751
Texas	135,882	22,351	45,148	68,383
Mountain	**108,898**	**21,066**	**28,536**	**59,296**
Arizona	17,772	2	5,133	12,637
Colorado	26,376	4,039	5,664	16,673
Idaho	4,665	0	1,525	3,140
Montana	9,232	2,235	3,433	3,564
Nevada	4,219	8	1,132	3,079
New Mexico	26,359	10,362	6,894	9,103
Utah	10,144	1,027	1,089	8,028
Wyoming	10,131	3,393	3,666	3,072
Pacific	**113,124**	**1,038**	**11,394**	**100,692**
Alaska	1,917	7	350	1,560
California	87,006	1,031	7,650	78,325
Hawaii	604	0	0	604
Oregon	10,670	0	1,408	9,262
Washington	12,927	0	1,986	10,941

a. Excludes 411,309 miles of service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of year.

b. Includes 5,945 miles of underground storage pipe.

TABLE 5-4
GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN INSTALLED DURING 1987, BY STATE AND BY TYPE OF PIPE[a]

		Field and Gathering	Transmission Pipeline	Distribution Main			
Division and State	Total[b]	Steel	Steel[c]	Total	Steel	Plastic[d]	Other
United States	**18,858**	**509**	**1,453**	**16,896**	**4,801**	**11,983**	**112**
New England	**549**	**0**	**13**	**536**	**103**	**432**	**1**
Connecticut	97	0	0	97	24	73	0
Maine	10	0	0	10	1	9	0
Massachusetts	351	0	13	338	59	279	0
New Hampshire	22	0	0	22	1	20	1
Rhode Island	56	0	0	56	13	43	0
Vermont	13	0	0	13	5	8	0
Middle Atlantic	**2,055**	**50**	**181**	**1,824**	**349**	**1,471**	**4**
New Jersey	850	0	50	800	174	626	0
New York	442	7	27	408	57	351	0
Pennsylvania	763	43	104	616	118	494	4
East North Central	**3,690**	**61**	**144**	**3,485**	**1,306**	**2,179**	**0**
Illinois	1,107	0	4	1,103	855	248	0
Indiana	932	0	55	877	51	826	0
Michigan	518	21	22	475	24	451	0
Ohio	715	40	63	612	347	265	0
Wisconsin	418	0	0	418	29	389	0
West North Central	**1,631**	**19**	**55**	**1,557**	**255**	**1,263**	**39**
Iowa	269	0	1	268	22	215	31
Kansas	331	16	31	284	118	166	0
Minnesota	516	0	0	516	40	473	3
Missouri	379	0	11	368	47	321	0
Nebraska	60	0	5	55	15	35	5
North Dakota	30	3	2	25	0	25	0
South Dakota	46	0	5	41	13	28	0
South Atlantic	**3,045**	**20**	**225**	**2,800**	**1,328**	**1,428**	**44**
Delaware	66	0	0	66	1	15	29
District of Columbia	19	0	0	19	4	36	0
Florida	319	0	34	285	101	184	0
Georgia	820	0	86	734	695	39	0
Maryland	130	0	14	116	28	77	11
North Carolina	455	0	13	442	75	367	0
South Carolina	482	0	6	476	154	322	0
Virginia	565	0	52	513	246	263	4
West Virginia	189	20	20	149	24	125	0
East South Central	**1,382**	**14**	**128**	**1,240**	**425**	**792**	**23**
Alabama	301	0	52	249	46	186	17
Kentucky	321	14	17	290	191	99	0
Mississippi	162	0	33	129	25	98	6
Tennessee	598	0	26	572	163	409	0
West South Central	**2,379**	**270**	**651**	**1,458**	**365**	**1,092**	**1**
Arkansas	143	10	59	74	1	73	0
Louisiana	317	10	93	214	89	125	0
Oklahoma	181	22	10	149	3	146	0
Texas	1,738	228	489	1,021	272	748	1
Mountain	**2,307**	**45**	**45**	**2,217**	**383**	**1,834**	**0**
Arizona	639	0	4	635	83	552	0
Colorado	471	10	9	452	86	366	0
Idaho	35	0	0	35	0	35	0
Montana	119	17	1	101	1	100	0
Nevada	189	0	3	186	5	181	0
New Mexico	137	6	24	107	20	87	0
Utah	681	2	0	679	188	491	0
Wyoming	36	10	4	22	0	22	0
Pacific	**1,820**	**30**	**11**	**1,779**	**287**	**1,492**	**0**
Alaska	0	0	0	0	0	0	0
California	1,251	30	11	1,210	150	1,060	0
Hawaii	9	0	0	9	0	9	0
Oregon	206	0	0	206	68	138	0
Washington	354	0	0	354	69	285	0

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a. Excludes service pipe. Data not adjusted to common diameter equivalent.

b. Does not include 129 miles of plastic and other pipe classified as field and gathering and transmission pipe.

c. Includes 22 miles of underground storage pipe.

d. Includes fiberglass.

TABLE 5-5
GAS UTILITY INDUSTRY REQUIREMENTS OF STEEL PIPE FOR NEW CONSTRUCTION AND MAINTENANCE AND REPAIR BY SIZE OF PIPE, 1987

(Miles)

Size of Pipe	Total	New Construction	Maintenance Repair
Normal Pipe Size—Inches			
¾ and less	834.7	703.5	131.2
1	232.1	178.2	53.9
1¼	258.6	213.6	45.0
1½	129.9	127.0	2.9
Outside Diameter—Inches			
2⅜	1,231.9	1,069.0	162.9
3½	152.5	124.1	28.4
4½	940.0	804.6	135.4
6⅝	919.8	768.4	151.4
8⅝	798.7	621.6	177.1
10¾	307.3	260.2	47.1
12¾	283.4	165.9	117.5
14	5.6	5.1	0.5
16	254.9	208.8	46.1
18	2.8	1.7	1.1
20	83.6	23.2	60.4
22	71.1	0.2	70.9
24	10.4	7.5	2.9
26	11.5	2.3	9.2
30	160.4	151.9	8.5
34	0.0	0.0	0.0
36	24.5	22.5	2.0
42	17.2	17.2	0.0
Other Sizes	4.8	3.8	1.0
Total	**6,735.7**	**5,480.3**	**1,255.4**

TABLE 5-6
GAS UTILITY INDUSTRY INSTALLED COMPRESSOR HORSEPOWER, 1965-1987

(Thousands)

Year	Total	Transmission
1965	9,708	7,736
1966	10,242	8,182
1967	10,746	8,596
1968	11,438	9,146
1969	12,742	9,375
1970	13,150	9,692
1971	14,142	10,763
1972	14,506	10,976
1973	14,858	11,272
1974	15,181	11,883[a]
1975	15,413	12,069
1976	15,472	12,046
1977	15,553	12,105
1978	15,824	12,255
1979	16,030	12,437
1980	16,375	13,091
1981	16,601	13,270
1982	16,965	13,460
1983	16,900	13,426
1984	16,880	13,368
1985	16,567	13,131
1986[R]	16,447	13,167
1987	16,356	13,650

a. Not comparable to previous years due to reclassification.

R-Revised.

TABLE 5-7
SELECTED STATISTICS FOR MAJOR TRANSMISSION COMPANIES, 1987

Name of Transmission System	No. of Transmission Compressor Stations	Total Miles of Transmission Pipeline	Peak Day Sendout (MMCF)	Operating Revenues ($000,000)
Algonquin Gas Transmission Co.	5	975	975	$ 521.6
ANR Pipeline Co.	45	8,623	1,963	1,264.7
Colorado Interstate Gas Co.	26	2,979	1,108	470.1
Columbia Gas Transmission Co.	112	10,934	6,717	1,599.3
Columbia Gulf Transmission Co.	19	4,256	1,853	147.8
Consolidated Gas Transmission Corp.	45	3,553	2,771	982.2
East Tennessee Natural Gas Co.	15	1,084	a	201.3
El Paso Natural Gas Co.	88	10,906	2,092	1,338.7
Enron-Northern Natural	118	15,420	3,752	1,376.2
Florida Gas Transmission Co.	20	4,411	917	693.5
Midwestern Gas Transmission Co.	14	913	a	404.5
Mississippi River Transmission Co.	15	1,996	930	410.3
Natural Gas Pipeline Co. of America	70	8,145	3,873	1,226.2
Pacific Gas Transmission Co.	12	799	1,158	761.8
Panhandle Eastern Pipeline Co.	67	6,663	1,089	855.7
South Georgia Natural Gas Co.	2	767	113	55.6
Southern Natural Gas Co.	47	7,653	2,255	869.7
Tenneco, Inc.	68	14,073	6,146	1,629.3
Texas Eastern Transmission Co.	77	9,726	4,299	1,917.9
Texas Gas Transmission Corp.	28	5,745	3,182	788.9
Transcontinental Gas Pipeline Corp.	40	10,315	9,960	1,712.3
Transwestern Pipeline Co.	119	4,463	1,042	414.7
Trunkline Gas Co.	21	4,020	781	744.0
United Gas Pipeline Co.	31	7,352	676	834.0
Williams Natural Gas Co.	43	5,844	a	573.6

a. Not available.

Source: Federal Energy Regulatory Commission, FERC Form No. 2: Annual Report of Natural Gas Companies (Class A and Class B), 1987.

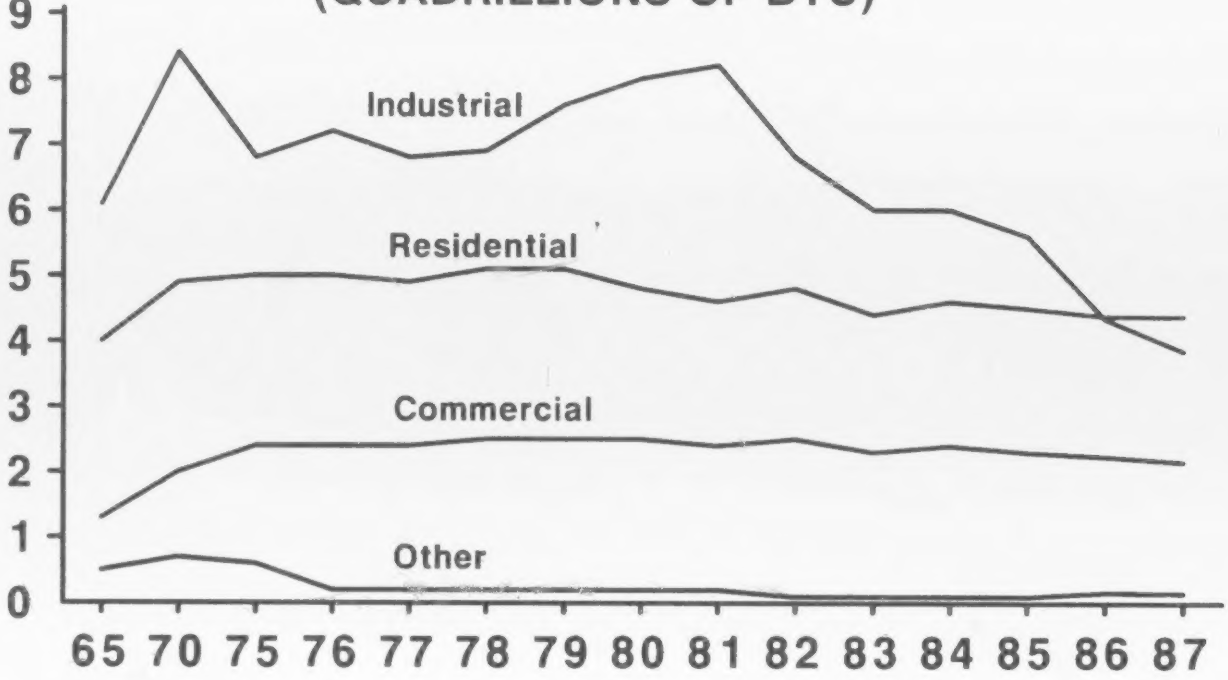
SECTION 6
SALES—QUANTITIES

	1987	% Change 87/86
Gas Utility Industry		
(Trillions of Btu)		
Total Sales	10,543.2	− 5.2
Residential	4,384.8	+ 0.1
Commercial	2,155.8	− 3.7
Industrial	3,847.9	−11.3
Industrial Only	2,338.8	−19.1
Electric Generation	1,509.1	+ 4.3
Other	154.7	− 7.5
Resale	6,497.2	−14.6

NOTE: Part of the decline in Gas Utility Sales are due to the continued increase of activity in spot market sales and the resulting transportation of gas to end-users. For volumes of gas transported to end-users (and therefore not sold by gas utilities) see Table 3-15.

CHART 6-1

GAS UTILITY SALES BY CLASS OF SERVICE
(QUADRILLIONS OF BTU)



REFERENCE: TABLE 6-1

SALES—QUANTITIES

TABLE 6-1
GAS UTILITY INDUSTRY SALES, BY CLASS OF SERVICE
1965-1987

(Trillions of Btu)

Year	Total	Residential	Commercial	Industrial[a]	Other[a]
1965	11,980.3	3,999.0	1,344.8	6,146.5	490.0
1966	12,859.1	4,175.4	1,462.8	6,653.3	567.6
1967	13,488.3	4,365.3	1,577.6	7,014.3	531.1
1968	14,472.4	4,552.7	1,704.9	7,595.1	619.7
1969	15,391.6	4,820.4	1,878.1	8,135.8	557.3
1970	16,043.5	4,923.7	2,006.6	8,439.2	674.0
1971	16,685.7	5,040.1	2,155.5	8,645.5	844.7
1972	17,082.1	5,141.8	2,275.7	8,779.7	888.8
1973	16,479.9	4,993.6	2,280.8	8,370.8	834.7
1974	16,000.3	4,864.8	2,293.4	8,153.2	689.0
1975	14,862.9	4,991.0	2,386.8	6,837.1	648.0
1976	14,813.5	5,014.2	2,422.6	7,192.0	184.6
1977	14,340.9	4,946.3	2,409.4	6,796.4	188.9
1978	14,748.4	5,106.7	2,499.5	6,931.5	210.7
1979	15,440.3	5,083.1	2,485.8	7,641.4	230.0
1980R	15,413.2	4,826.1	2,453.4	7,965.9	167.7
1981	15,374.8	4,609.7	2,375.4	8,239.3	150.4
1982	14,182.7	4,769.8	2,471.3	6,794.3	147.3
1983	12,857.5	4,449.6	2,298.2	5,969.4	140.2
1984	13,161.7	4,628.3	2,396.0	5,991.0	146.4
1985	12,615.2	4,513.0	2,338.0	5,634.7	129.5
1986R	11,125.1	4,380.8	2,238.9	4,338.2	167.2
1987	10,543.2	4,384.8	2,155.8	3,847.9	154.7

a. Prior to 1976, "Other" electric generation (see Table 6-12) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.

R - Revised.

TABLE 6-2
GAS UTILITY INDUSTRY SALES, BY CLASS OF SERVICE AND TYPE OF COMPANY
1981-1987[a]

(Trillions of Btu)

	1981	1982	1983	1984	1985	1986R	1987
Distribution							
Total	**3,136**	**2,981**	**2,925**	**3,078**	**3,803**	**3,439**	**3,251**
Residential	1,240	1,259	1,282	1,358	1,696	1,632	1,621
Commercial	737	771	727	780	948	906	871
Industrial	1,145	938	897	919	1,131	874	732
Other	14	13	20	21	28	27	27
Transmission							
Total	**2,689**	**2,087**	**1,826**	**1,711**	**1,708**	**1,496**	**1,408**
Residential	1	1	1	1	1	1	1
Commercial	7	7	3	4	3	5	3
Industrial	2,657	2,055	1,806	1,687	1,689	1,437	1,375
Other	24	24	17	20	15	53	29
Integrated							
Total	**5,197**	**4,910**	**4,203**	**4,290**	**2,922**	**2,396**	**2,209**
Residential	1,719	1,799	1,560	1,626	1,086	1,025	1,052
Commercial	778	804	739	782	522	469	454
Industrial	2,645	2,254	1,864	1,841	1,294	873	665
Other	55	53	40	41	20	29	38
Combination							
Total	**3,681**	**3,543**	**3,268**	**3,419**	**3,578**	**3,234**	**3,102**
Residential	1,369	1,426	1,335	1,358	1,464	1,458	1,445
Commercial	725	755	703	690	728	724	689
Industrial	1,549	1,325	1,192	1,331	1,339	1,009	926
Other	38	38	39	39	47	43	42
Municipals							
Total	**672**	**662**	**635**	**664**	**605**	**561**	**573**
Residential	281	285	271	286	266	264	265
Commercial	128	134	126	141	137	136	138
Industrial	244	224	212	213	182	145	152
Other	19	20	25	25	20	16	18

a. All electric generation is included in the Industrial category.

R - Revised.

Note: This table depicts total sales as shown on Table 6-1, by company type. Also, data by company type not directly comparable from year to year due to acquisitions and mergers. See page ix.

SALES—QUANTITIES

TABLE 6-3
GAS UTILITY INDUSTRY SALES, BY QUARTER AND CLASS OF SERVICE
1965-1987

(Trillions of Btu)

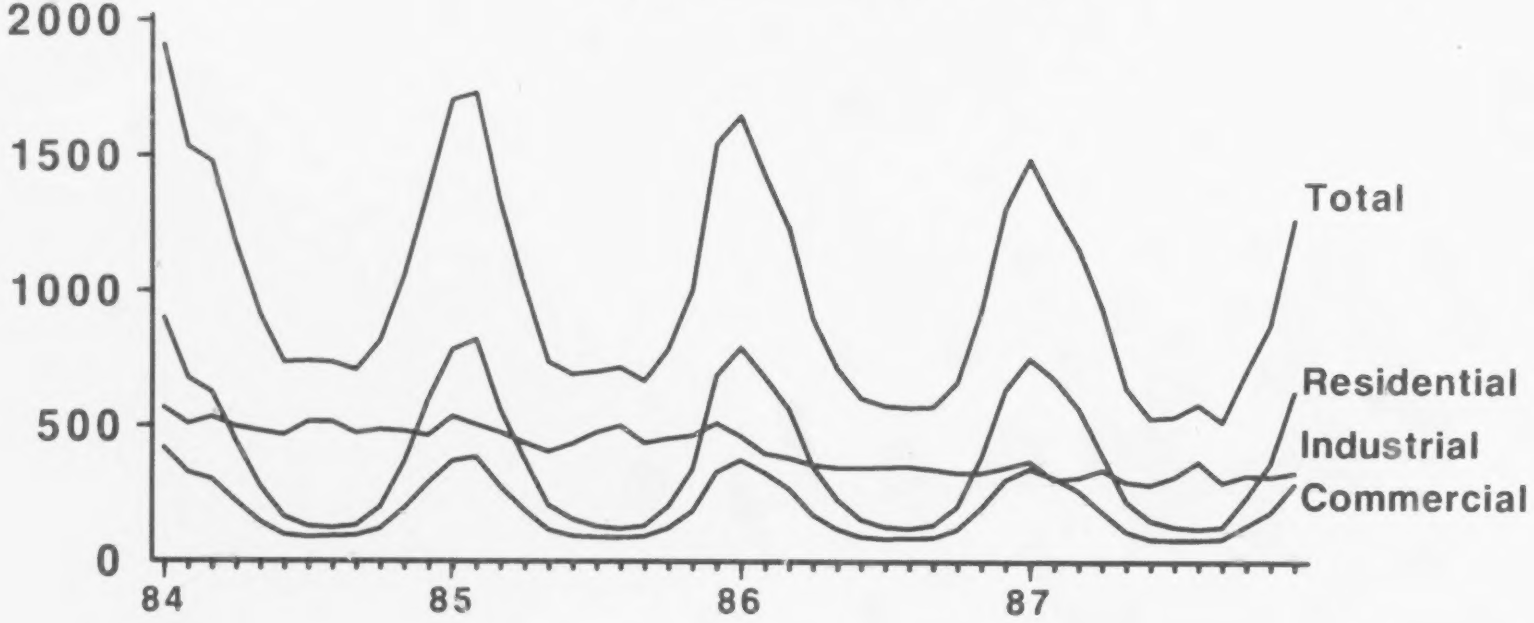
Year and Quarter	Total	Residential	Commercial	Industrial[a]	Other[a]
1965					
First	3,946.6	1,811.2	575.2	1,424.3	135.9
Second	2,818.1	878.9	291.2	1,538.8	109.2
Third	2,212.1	346.1	144.9	1,603.3	117.8
Fourth	3,001.0	961.1	332.8	1,580.0	127.1
1970					
First	5,262.3	2,286.9	867.7	1,939.2	168.6
Second	3,808.1	1,024.3	423.8	2,201.4	158.4
Third	3,041.5	420.7	218.6	2,236.1	166.0
Fourth	3,931.6	1,191.8	496.5	2,062.5	181.0
1975					
First	4,931.5	2,192.8	970.4	1,598.7	169.6
Second	3,520.9	1,137.7	536.3	1,715.9	131.0
Third	2,794.9	474.9	301.2	1,842.2	176.6
Fourth	3,615.6	1,185.6	579.0	1,680.2	170.8
1980[R]					
First	5,434.3	2,218.9	1,031.1	2,121.8	62.5
Second	3,258.5	914.7	464.5	1,845.7	33.6
Third	2,753.3	405.3	300.1	2,021.5	26.4
Fourth	3,967.1	1,287.3	657.7	1,974.9	47.2
1981[R]					
First	5,312.2	2,171.2	1,007.5	2,075.9	57.6
Second	3,384.9	797.4	430.3	2,127.2	30.0
Third	2,792.9	399.5	293.6	2,076.9	22.9
Fourth	3,884.8	1,241.6	644.0	1,959.3	39.9
1982					
First	5,350.7	2,318.2	1,086.6	1,888.2	57.7
Second	3,020.3	880.9	465.1	1,645.6	28.7
Third	2,416.1	404.4	297.2	1,692.4	22.1
Fourth	3,395.6	1,166.3	622.4	1,568.1	38.8
1983					
First	4,439.2	1,917.5	921.9	1,547.0	52.8
Second	2,835.9	935.1	477.3	1,393.3	30.2
Third	2,220.5	382.2	277.4	1,540.6	20.3
Fourth	3,361.9	1,214.9	621.6	1,488.5	36.9
1984					
First	4,918.2	2,199.7	1,050.1	1,608.3	60.1
Second	2,821.1	882.5	464.2	1,446.0	28.4
Third	2,182.9	383.7	276.5	1,504.2	18.5
Fourth	3,239.5	1,162.4	605.2	1,432.5	39.4
1985					
First	4,761.7	2,161.7	1,030.7	1,515.3	54.0
Second	2,441.2	740.5	399.9	1,277.0	23.8
Third	2,081.9	381.9	269.2	1,413.9	16.9
Fourth	3,330.4	1,228.9	638.2	1,428.5	34.8
1986[R]					
First	4,306.9	2,038.9	973.3	1,240.9	53.8
Second	2,203.9	729.9	384.5	1,050.5	39.0
Third	1,714.2	384.1	260.0	1,041.2	28.9
Fourth	2,900.1	1,227.9	621.1	1,005.6	45.5
1987					
First	3,955.9	1,997.2	918.3	985.9	54.5
Second	2,107.4	774.3	383.0	919.9	30.2
Third	1,636.9	383,2	249.9	977.2	26.6
Fourth	2,843.0	1,230.1	604.6	964.9	43.4

[a] Prior to 1976, "Other" electric generation (see Table 6-12) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.

R–Revised.

CHART 6-2

UTILITY SALES OF NATURAL GAS TO CONSUMERS BY MONTH, 1984 - 1987
(TRILLIONS OF BTU)



REFERENCE: TABLE 6-4

TABLE 6-4
GAS UTILITY INDUSTRY TOTAL SALES, BY MONTH, 1965-1987

(Trillions of Btu)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1965	1,304.0	1,329.2	1,313.4	1,168.2	874.9	775.0	748.0	732.8	731.3	823.5	979.4	1,197.9	11,977.6
1970	1,865.8	1,733.0	1,663.0	1,527.7	1,225.7	1,054.3	1,013.5	1,020.2	1,007.5	1,081.1	1,283.7	1,566.4	16,041.9
1971	1,886.8	1,873.5	1,769.5	1,559.1	1,312.2	1,145.2	1,053.3	1,037.4	1,023.7	1,100.9	1,305.7	1,618.4	16,685.7
1972	1,833.1	1,908.1	1,758.3	1,542.6	1,292.5	1,176.1	1,056.1	1,125.9	1,094.5	1,120.0	1,378.7	1,796.2	17,082.1
1973	1,909.4	1,752.8	1,645.3	1,500.1	1,332.1	1,143.8	1,104.8	1,069.0	1,063.1	1,136.5	1,306.7	1,516.3	16,479.9
1974	1,847.6	1,707.2	1,630.7	1,493.6	1,251.6	1,119.9	1,050.8	1,034.9	992.3	1,115.2	1,219.8	1,536.7	16,000.3
1975	1,709.5	1,633.6	1,588.4	1,455.3	1,120.8	944.8	924.7	934.8	935.4	1,009.2	1,102.8	1,503.6	14,862.9
1976	1,797.5	1,644.6	1,451.0	1,252.2	1,099.8	965.6	913.1	900.8	899.1	996.4	1,278.3	1,614.7	14,813.5
1977	1,901.9	1,682.7	1,425.7	1,168.4	974.8	904.5	875.8	866.5	860.7	976.7	1,153.5	1,549.8	14,340.9
1978	1,808.7	1,834.1	1,647.5	1,237.7	1,061.4	921.4	895.1	878.8	839.6	947.7	1,151.1	1,525.5	14,748.4
1979	1,925.1	1,923.8	1,630.5	1,356.3	1,074.6	934.9	903.7	920.9	891.3	1,038.9	1,253.4	1,587.0	15,440.4
1980[R]	1,834.6	1,871.4	1,728.3	1,315.2	1,024.3	919.0	928.2	918.9	906.2	1,024.5	1,287.0	1,655.6	15,413.2
1981[R]	1,957.1	1,759.8	1,595.3	1,274.3	1,107.4	1,003.2	957.9	933.2	901.8	1,044.8	1,235.1	1,604.9	15,374.8
1982	1,964.4	1,831.3	1,555.0	1,288.9	911.8	819.6	816.7	823.6	775.8	864.7	1,117.5	1,413.4	14,182.7
1983	1,619.9	1,513.6	1,305.7	1,189.1	906.1	740.7	728.5	762.7	729.3	809.6	1,029.7	1,522.6	12,857.5
1984	1,907.9	1,532.8	1,477.5	1,172.3	912.8	736.0	739.9	736.2	706.8	812.5	1,054.5	1,372.5	13,161.7
1985	1,705.5	1,729.3	1,326.9	1,013.5	736.4	691.3	699.9	716.0	666.0	784.5	1,001.6	1,544.3	12,615.2
1986[R]	1,649.9	1,428.7	1,228.3	892.5	709.4	602.0	574.2	568.4	571.6	663.4	926.2	1,310.5	11,125.1
1987	1,486.6	1,311.3	1,158.0	936.0	641.5	529.9	536.0	582.1	518.8	702.6	876.3	1,264.1	10,543.2

R–Revised.

TABLE 6-5
GAS UTILITY INDUSTRY SALES, BY STATE, 1965-1987[a]

(Trillions of Btu)

Division and State	1965	1970	1975	1980	1985	1986[R]	1987
United States	**11,980.3**	**16,043.5**	**14,862.9**	**15,413.2**	**12,615.2**	**11,125.1**	**10,543.2**
New England	**172.0**	**236.7**	**243.5**	**298.2**	**348.5**	**315.1**	**369.9**
Connecticut	44.0	61.4	61.0	73.4	78.6	79.1	86.8
Maine	1.3	1.8	2.0	2.2	2.6	2.5	2.7
Massachusetts	105.0	139.5	145.9	182.5	220.9	190.0	230.6
New Hampshire	4.3	6.7	7.8	9.5	10.6	10.8	11.9
Rhode Island	16.9	25.2	23.4	26.4	30.6	27.5	32.4
Vermont	0.5	2.1	3.4	4.1	5.2	5.2	5.4
Middle Atlantic	**1,293.4**	**1,651.0**	**1,495.1**	**1,658.2**	**1,499.9**	**1,414.5**	**1,392.6**
New Jersey	194.1	294.9	257.9	322.7	334.8	329.3	351.9
New York	475.6	595.9	581.9	600.8	639.1	588.6	568.1
Pennsylvania	623.7	760.2	655.4	734.7	526.0	496.6	472.6
East North Central	**2,724.4**	**3,896.4**	**3,749.5**	**3,658.1**	**2,897.2**	**2,614.6**	**2,164.3**
Illinois	746.5	1,140.3	1,112.4	1,100.3	900.9	870.7	696.0
Indiana	344.6	505.0	458.8	475.9	399.0	336.6	267.0
Michigan	545.3	839.4	885.8	850.0	667.6	571.2	476.0
Ohio	891.0	1,084.9	929.8	888.0	624.7	577.3	521.2
Wisconsin	197.0	326.8	362.7	343.9	305.0	258.8	204.1
West North Central	**1,316.0**	**1,743.7**	**1,592.4**	**1,412.3**	**1,144.0**	**1,034.2**	**896.0**
Iowa	205.6	292.5	298.8	255.8	216.9	199.3	160.1
Kansas	350.4	459.5	410.4	364.6	248.7	210.8	168.5
Minnesota	230.9	324.3	295.0	267.1	250.8	234.8	216.3
Missouri	333.2	421.0	344.5	326.8	256.2	242.2	222.1
Nebraska	153.7	197.8	187.2	152.5	124.0	103.3	91.2
North Dakota	15.6	18.9	24.7	21.6	22.6	20.8	18.2
South Dakota	26.6	29.7	31.8	23.9	24.8	23.0	19.6
South Atlantic	**871.8**	**1,311.1**	**1,106.1**	**1,255.7**	**1,095.0**	**1,072.0**	**1,101.5**
Delaware	16.6	24.3	19.3	22.7	22.6	22.2	21.3
District of Columbia	21.8	27.1	24.8	27.6	28.0	29.8	31.0
Florida	144.2	218.7	127.4	232.2	232.9	239.8	256.2
Georgia	210.3	333.8	312.5	299.7	270.5	237.3	231.9
Maryland	96.8	145.1	138.8	154.6	118.5	122.5	126.1
North Carolina	73.9	151.2	104.8	143.2	125.3	130.4	134.4
South Carolina	73.9	120.1	118.3	112.3	94.5	93.2	100.5
Virginia	91.3	133.9	116.0	134.8	124.3	124.7	123.7
West Virginia	143.0	156.9	144.3	128.6	78.4	72.1	76.4
East South Central	**729.7**	**995.4**	**752.8**	**808.0**	**625.3**	**523.3**	**477.5**
Alabama	224.8	290.0	227.9	224.6	179.2	155.3	129.1
Kentucky	142.1	189.9	180.0	175.9	141.7	119.7	111.5
Mississippi	177.1	265.6	141.3	191.5	140.9	103.3	83.8
Tennessee	185.7	249.9	203.5	216.1	163.5	145.0	153.1
West South Central	**2,408.5**	**3,031.0**	**2,973.6**	**3,534.9**	**2,330.4**	**2,042.1**	**1,950.7**
Arkansas	228.6	339.9	219.4	207.4	142.9	111.6	90.8
Louisiana	592.0	742.1	457.3	515.2	285.2	207.3	256.5
Oklahoma	255.0	275.6	417.9	472.3	263.4	157.7	151.7
Texas	1,332.9	1,673.4	1,878.9	2,340.0	1,638.9	1,565.5	1,451.7
Mountain	**703.8**	**926.1**	**928.6**	**841.9**	**655.4**	**507.4**	**487.7**
Arizona	127.3	168.1	144.4	136.4	119.4	71.3	72.6
Colorado	196.5	253.6	269.2	242.3	191.6	165.0	165.1
Idaho	34.8	43.1	51.2	45.4	33.0	20.9	21.5
Montana	67.4	78.8	79.8	54.1	44.0	37.3	34.7
Nevada	29.7	56.0	61.3	62.1	41.5	31.7	31.4
New Mexico	106.2	135.6	142.5	125.7	74.7	59.8	58.6
Utah	101.8	119.1	119.4	121.7	113.2	91.6	80.6
Wyoming	40.1	71.8	60.8	54.3	38.0	29.8	23.3
Pacific	**1,760.7**	**2,252.1**	**2,021.3**	**1,945.9**	**2,019.5**	**1,601.9**	**1,703.0**
Alaska	5.2	16.6	30.7	32.3	42.6	42.3	39.9
California	1,580.1	1,986.8	1,735.6	1,700.0	1,762.9	1,375.7	1,465.8
Hawaii	2.0	2.8	3.6	3.5	3.1	3.1	3.2
Oregon	59.0	88.1	86.8	76.4	77.2	63.5	68.7
Washington	114.4	157.8	164.6	133.8	133.7	117.3	125.3

a Excludes sales for resale.
R–Revised.

SALES—QUANTITIES

TABLE 6-6
GAS UTILITY INDUSTRY SALES OF GAS FOR RESALE, BY STATE
1965-1987

(Trillions of Btu)

Division and State	1965[a]	1970	1975	1980	1985	1986	1987
United States	**12,566.4**	**17,575.6**	**14,504.5**	**15,705.1**	**10,408.1**	**7,611.2**	**6,497.2**
New England	**194.0**	**276.0**	**271.5**	**299.8**	**291.8**	**262.9**	**313.1**
Connecticut		83.0	82.7	76.4	67.2	62.3	68.6
Maine		0.0	0.0	0.0	0.0	0.0	0.0
Massachusetts		156.6	160.0	188.8	188.1	164.4	169.8
New Hampshire		8.6	5.8	6.8	7.6	7.5	46.4
Rhode Island		27.8	21.8	27.9	28.9	28.7	28.3
Vermont		0.0	1.3	0.0	0.0	0.0	0.0
Middle Atlantic	**1,827.4**	**2,433.3**	**1,901.6**	**2,334.0**	**1,671.4**	**1,305.9**	**1,233.6**
New Jersey		491.9	370.2	510.6	404.7	356.0	380.7
New York		802.5	572.2	707.5	566.3	385.6	362.7
Pennsylvania		1,138.9	959.2	1,115.9	700.4	564.3	490.2
East North Central	**3,296.3**	**5,249.0**	**4,542.8**	**4,442.0**	**2,945.1**	**2,054.0**	**1,308.6**
Illinois		1,688.6	1,537.1	1,613.3	1,147.1	788.9	423.3
Indiana		513.6	406.8	461.4	325.8	336.6	245.0
Michigan		698.5	759.4	615.8	329.7	141.0	79.0
Ohio		1,892.4	1,356.1	1,315.3	774.8	522.4	409.8
Wisconsin		455.9	483.4	436.1	367.7	265.1	151.5
West North Central	**975.2**	**1,306.9**	**1,144.5**	**1,043.9**	**903.9**	**841.2**	**675.4**
Iowa		271.0	259.7	208.9	160.8	147.0	89.4
Kansas		206.4	169.7	149.4	127.6	110.6	95.9
Minnesota		272.6	239.0	239.1	225.6	277.4	184.1
Missouri		405.2	338.0	337.8	275.0	249.8	211.9
Nebraska		124.7	111.7	86.4	73.1	68.0	61.8
North Dakota		5.2	5.5	4.9	17.4	16.4	13.8
South Dakota		21.8	20.8	17.5	24.4	22.0	18.5
South Atlantic	**1,605.2**	**1,981.1**	**1,372.5**	**1,470.3**	**893.7**	**694.5**	**563.5**
Delaware		1.1	1.2	1.2	1.8	1.6	1.1
District of Columbia		0.0	0.0	0.0	0.0	0.0	0.0
Florida		63.4	82.7	94.7	91.8	85.9	97.3
Georgia		327.0	315.5	308.7	257.7	179.0	128.6
Maryland		183.1	151.0	184.5	110.1	98.8	75.0
North Carolina		157.9	118.5	165.8	124.7	89.0	101.4
South Carolina		166.5	127.6	135.2	83.9	62.8	57.3
Virginia		218.3	181.9	209.1	155.4	140.6	72.6
West Virginia		863.8	394.1	371.2	68.3	36.8	30.2
East South Central	**1,116.2**	**1,573.5**	**1,178.0**	**1,256.5**	**745.6**	**566.5**	**450.5**
Alabama		237.0	219.3	219.8	168.0	104.3	67.0
Kentucky		417.6	238.4	237.3	157.8	107.2	94.0
Mississippi		349.3	263.1	289.1	127.1	73.4	51.1
Tennessee		569.6	457.3	510.3	292.7	281.6	238.4
West South Central	**1,136.4**	**1,497.3**	**1,215.9**	**2,007.4**	**818.9**	**548.4**	**631.3**
Arkansas		22.6	16.1	16.0	12.9	11.9	29.1
Louisiana		854.6	569.2	661.9	268.5	138.1	125.5
Oklahoma		166.6	148.6	206.2	61.4	29.6	29.4
Texas		453.6	482.1	1,123.3	476.1	368.8	447.3
Mountain	**1,562.0**	**2,021.0**	**1,901.8**	**1,871.0**	**1,490.5**	**836.8**	**683.8**
Arizona		1,477.8	1,341.0	1,370.5	1,062.6	512.6	377.7
Colorado		249.0	279.6	261.8	194.8	161.1	155.5
Idaho		73.0	84.2	66.7	50.2	32.9	35.9
Montana		7.5	7.7	7.6	17.6	14.4	13.1
Nevada		5.8	9.5	9.9	10.3	9.3	10.3
New Mexico		104.9	71.8	58.6	37.8	12.8	12.1
Utah		21.3	7.4	8.4	75.8	66.8	59.5
Wyoming		81.6	100.6	87.5	41.4	26.9	19.7
Pacific	**853.7**	**1,237.6**	**975.9**	**980.1**	**647.2**	**501.0**	**637.4**
Alaska		0.0	0.0	27.4	0.0	0.0	0.0
California		680.5	346.5	436.5	145.0	121.6	145.6
Hawaii		0.0	0.0	0.0	0.0	0.0	0.0
Oregon		399.9	470.2	388.3	372.9	290.4	411.9
Washington		157.2	159.1	127.8	129.3	89.0	79.9

a. Includes natural gas only prior to 1970 and state breakdowns not available prior to 1970.

TABLE 6-7
GAS UTILITY INDUSTRY SALES, BY STATE AND CLASS OF SERVICE, 1987

(Trillions of Btu)

		Class of Service					
Division and State	Total	Residential	Commercial	Industrial	Electric Generation	Other	Average Btu Value
United States	**10,543.2**	**4,384.8**	**2,155.8**	**2,338.8**	**1,509.1**	**154.7**	**1,026.9**
New England	**369.9**	**163.3**	**96.2**	**60.8**	**46.6**	**3.1**	**1,026.9**
Connecticut	86.8	38.2	26.6	20.3	1.6	0.1	1,031.2
Maine	2.7	0.5	1.3	0.9	0.0	0.0	1,038.8
Massachusetts	230.6	100.2	56.2	30.7	40.9	2.7	1,027.3
New Hampshire	11.9	5.6	4.5	1.7	0.0	0.1	1,019.0
Rhode Island	32.4	16.9	5.7	5.6	4.1	0.2	1,020.2
Vermont	5.4	1.9	1.9	1.6	0.0	a	986.9
Middle Atlantic	**1,392.6**	**769.2**	**318.3**	**227.3**	**44.1**	**33.7**	**1,028.9**
New Jersey	351.9	173.1	95.1	59.2	24.3	0.2	1,039.7
New York	568.1	339.6	114.5	69.9	19.2	24.9	1,021.5
Pennsylvania	472.6	256.5	108.7	98.2	0.6	8.6	1,029.8
East North Central	**2,164.3**	**1,317.7**	**517.2**	**314.7**	**5.3**	**9.3**	**1,020.5**
Illinois	696.0	415.6	173.6	104.5	2.2	0.1	1,020.7
Indiana	267.0	139.2	59.5	66.4	0.3	1.6	989.4
Michigan	476.0	320.5	110.2	44.2	0.8	0.2	1,023.6
Ohio	521.2	338.2	125.4	50.4	0.6	6.6	1,038.5
Wisconsin	204.1	104.2	48.5	49.2	1.4	0.8	1,008.2
West North Central	**896.0**	**403.4**	**244.8**	**229.8**	**12.5**	**5.5**	**1,001.0**
Iowa	160.1	66.8	38.8	52.8	1.4	0.3	1,008.3
Kansas	168.5	69.1	42.2	49.6	5.2	2.4	990.3
Minnesota	216.3	91.7	49.0	72.1	2.6	0.9	998.7
Missouri	222.1	118.6	69.8	30.1	2.0	1.6	1,014.1
Nebraska	91.2	39.8	30.1	19.9	1.2	0.2	983.6
North Dakota	18.2	8.1	8.8	1.3	a	a	1,000.0
South Dakota	19.6	9.3	6.1	4.0	0.1	0.1	988.7
South Atlantic	**1,101.5**	**346.8**	**248.5**	**324.9**	**172.3**	**9.0**	**1,034.9**
Delaware	21.3	7.3	3.8	9.1	1.1	a	1,028.7
District of Columbia	31.0	12.6	18.4	0.0	0.0	0.0	1,026.0
Florida	256.2	14.5	34.4	51.8	152.9	2.7	1,038.2
Georgia	231.9	98.8	53.8	76.6	2.3	0.4	1,032.4
Maryland	126.1	67.3	31.8	19.5	7.4	a	1,034.6
North Carolina	134.4	36.6	28.1	67.8	1.0	0.9	1,030.6
South Carolina	100.5	20.2	17.7	62.1	0.1	0.3	1,026.7
Virginia	123.7	50.4	42.0	29.6	0.0	1.7	1,032.6
West Virginia	76.4	39.1	18.5	8.4	7.5	3.0	1,060.1
East South Central	**477.5**	**179.4**	**111.9**	**169.7**	**5.0**	**11.5**	**1,031.4**
Alabama	129.1	48.2	28.0	51.7	0.2	1.0	1,031.3
Kentucky	111.5	60.7	27.5	18.5	0.0	4.9	1,026.4
Mississippi	83.8	26.7	13.0	34.9	4.7	4.4	1,019.7
Tennessee	153.1	43.8	43.4	64.6	a	1.2	1,041.4
West South Central	**1,950.7**	**388.2**	**209.9**	**633.3**	**651.5**	**67.8**	**1,040.1**
Arkansas	90.8	40.7	24.7	25.1	0.1	0.2	1,014.8
Louisiana	256.5	61.2	22.5	106.1	38.7	28.0	1,038.4
Oklahoma	151.7	67.6	33.1	49.3	1.2	0.5	1,024.7
Texas	1,451.7	218.7	129.6	452.9	611.5	39.1	1,043.6
Mountain	**487.7**	**238.9**	**155.5**	**68.6**	**12.8**	**11.9**	**1,015.8**
Arizona	72.6	29.3	25.0	9.3	7.0	1.9	1,037.2
Colorado	165.1	86.4	60.9	15.7	1.7	0.4	1,001.4
Idaho	21.5	7.3	7.5	6.7	0.0	0.0	1,021.8
Montana	34.7	16.8	10.6	6.0	a	1.4	997.9
Nevada	31.4	14.1	13.1	1.9	1.8	0.4	993.2
New Mexico	58.6	29.3	14.0	5.6	1.8	7.8	1,082.5
Utah	80.6	45.0	16.0	19.3	0.3	a	1,000.0
Wyoming	23.3	10.7	8.4	4.0	0.2	a	993.2
Pacific	**1,703.0**	**577.9**	**253.5**	**309.7**	**558.9**	**2.9**	**1,029.1**
Alaska	39.9	12.0	11.0	0.0	16.9	0.0	1,003.0
California	1,465.8	515.4	192.0	213.7	542.0	2.6	1,029.4
Hawaii	3.2	0.6	1.6	1.1	0.0	0.0	1,085.9
Oregon	68.7	18.9	16.3	33.6	0.0	0.0	1,024.7
Washington	125.3	31.0	32.6	61.3	a	0.3	1,034.3

a. Less than 0.05 trillion Btu.

Note: See explanation on page 67 about transportation volumes.

TABLE 6-8
GAS UTILITY INDUSTRY FIRM AND INTERRUPTIBLE GAS SALES BY STATE, 1987

(Trillions of Btu)

	Commercial			Industrial[a]		
Division and State	Total	Firm	Interruptible	Total	Firm	Interruptible
United States	**2,155.8**	**2,009.3**	**146.5**	**2,338.8**	**1,009.7**	**1,329.1**
New England	**96.2**	**80.3**	**15.9**	**60.8**	**27.7**	**33.1**
Connecticut	26.6	17.9	8.7	20.3	8.5	11.8
Maine	1.3	1.1	0.2	0.9	0.8	0.1
Massachusetts	56.2	49.3	6.9	30.7	15.3	15.4
New Hampshire	4.5	4.4	b	1.7	0.7	1.0
Rhode Island	5.7	5.7	0.0	5.6	2.4	3.2
Vermont	1.9	1.9	0.0	1.6	0.0	1.6
Middle Atlantic	**318.3**	**291.6**	**26.7**	**227.3**	**130.4**	**96.9**
New Jersey	95.1	83.0	12.1	59.2	25.5	33.7
New York	114.5	111.3	3.2	69.9	42.9	27.0
Pennsylvania	108.7	97.3	11.4	98.2	62.0	36.2
East North Central	**517.2**	**508.3**	**8.9**	**314.7**	**245.9**	**68.8**
Illinois	173.6	172.0	1.6	104.5	83.9	20.6
Indiana	59.5	56.4	3.1	66.4	41.2	25.2
Michigan	110.2	109.9	0.3	44.2	36.7	7.5
Ohio	125.4	125.0	0.4	50.4	48.3	2.1
Wisconsin	48.5	45.0	3.5	49.2	35.8	13.4
West North Central	**244.8**	**221.1**	**23.7**	**229.8**	**109.0**	**120.8**
Iowa	38.8	32.6	6.2	52.8	37.6	15.2
Kansas	42.2	41.2	1.0	49.6	18.7	30.9
Minnesota	49.0	44.0	5.0	72.1	19.1	53.0
Missouri	69.8	64.8	5.0	30.1	24.7	5.4
Nebraska	30.1	26.8	3.3	19.9	7.6	12.3
North Dakota	8.8	6.3	2.5	1.3	b	1.3
South Dakota	6.1	5.4	0.7	4.0	1.3	2.7
South Atlantic	**248.5**	**212.2**	**36.3**	**324.9**	**112.4**	**212.5**
Delaware	3.8	3.7	0.1	9.1	5.5	3.6
District of Columbia	18.4	10.9	7.5	0.0	0.0	0.0
Florida	34.4	31.4	3.0	51.8	5.5	46.3
Georgia	53.8	53.1	0.7	76.6	15.0	61.6
Maryland	31.8	22.6	9.2	19.5	14.9	4.6
North Carolina	28.1	26.8	1.3	67.8	32.0	35.8
South Carolina	17.7	12.6	5.1	62.1	21.9	40.2
Virginia	42.0	33.8	8.2	29.6	11.1	18.5
West Virginia	18.5	17.3	1.2	8.4	6.5	1.9
East South Central	**111.9**	**104.7**	**7.2**	**169.7**	**110.2**	**59.5**
Alabama	28.0	24.3	3.7	51.7	28.2	23.5
Kentucky	27.5	26.3	1.2	18.5	12.8	5.7
Mississippi	13.0	13.0	b	34.9	32.9	2.0
Tennessee	43.4	41.1	2.3	64.6	36.3	28.3
West South Central	**209.9**	**204.2**	**5.7**	**633.3**	**199.2**	**434.1**
Arkansas	24.7	20.7	4.0	25.1	17.1	8.0
Louisiana	22.5	22.4	0.1	106.1	51.7	54.4
Oklahoma	33.1	32.4	0.7	49.3	23.0	26.3
Texas	129.6	128.7	0.9	452.9	107.5	345.4
Mountain	**155.5**	**154.3**	**1.2**	**68.6**	**37.9**	**30.7**
Arizona	25.0	24.7	0.3	9.3	9.1	0.2
Colorado	60.9	60.4	0.5	15.7	5.3	10.4
Idaho	7.5	7.5	0.0	6.7	6.3	0.4
Montana	10.6	10.5	0.1	6.0	1.0	5.0
Nevada	13.1	13.1	0.0	1.9	1.9	0.0
New Mexico	14.0	13.7	0.3	5.6	5.4	0.2
Utah	16.0	16.0	0.0	19.4	6.5	12.9
Wyoming	8.4	8.4	b	4.0	2.4	1.6
Pacific	**253.5**	**232.4**	**21.1**	**309.7**	**36.9**	**272.8**
Alaska	11.0	11.0	0.0	0.0	0.0	0.0
California	192.0	181.2	10.8	213.7	12.5	201.2
Hawaii	1.6	1.3	0.3	1.1	1.1	0.0
Oregon	16.3	16.1	0.2	33.6	7.8	25.8
Washington	32.6	22.8	9.8	61.3	15.5	45.8

a. Does not include electric generation. See Table 6-13.

b. Less than 0.05 trillion Btu.

TABLE 6-9
GAS UTILITY INDUSTRY SALES BY TYPE OF INDUSTRY CLASSIFICATION, 1965-1987

(Trillions of Btu)

Industry Classification	1965	1970	1975	1980[R]	1985	1986[R]	1987
Agriculture, forestry and fisheries	12.0	33.0	49.7	47.1	46.5	36.5	18.4
Petroleum and natural gas production	97.8	101.0	83.8	32.2	45.6	28.5	35.4
Other mining	69.8	59.8	49.3	55.6	27.7	19.9	5.8
Electric services[a]	1,734.2	2,588.6	1,685.2	2,520.5	2,327.1	1,769.0	1,908.4
Other transportation, communications, and public utilities	38.5	96.2	95.9	92.5	94.3	75.1	62.8
Hotels, rooming houses, camps	33.5	67.3	77.8	27.8	34.3	37.2	32.2
Laundries, cleaning and dyeing	16.3	21.5	24.3	22.0	28.5	30.7	24.8
Other services	70.1	175.1	236.7	309.5	372.5	355.5	277.1
Other non-manufacturing	74.9	198.6	187.5	151.8	288.7	316.2	270.9
Ordnance	21.2	35.4	b	b	b	b	b
Food and kindred products	243.0	330.5	338.9	320.2	252.5	196.8	125.1
Textile products, apparel, fabrics, etc.	43.7	72.5	54.6	64.3	57.4	58.1	57.9
Furniture, lumber, and other wood products	52.3	64.9	61.1	45.7	36.7	28.2	24.3
Paper and allied products	267.5	402.7	267.6	257.8	187.6	134.0	104.2
Carbon black	42.0	52.8	38.2	34.1	2.2	1.5	1.0
Chemicals and allied products (except carbon black)	644.6	880.7	886.5	603.8	35.6	355.8	173.5
Petroleum refining	375.1	639.6	514.5	372.0	118.3	62.5	28.7
Rubber and miscellaneous plastic products	38.9	47.8	45.1	50.7	42.2	32.3	24.9
Glass products	184.8	208.8	173.7	170.9	93.7	76.8	43.3
Cement	183.5	195.0	158.1	49.2	8.3	5.7	3.3
Clay products, pottery, etc.	153.7	145.3	110.0	86.4	58.0	47.6	28.8
Other stone products and miscellaneous	68.3	82.3	97.0	85.5	48.9	41.6	25.2
Primary iron and steel industries	552.4	669.0	555.5	546.3	265.9	172.3	78.2
Primary non-ferrous industries	270.8	232.9	275.9	194.4	124.5	84.2	50.4
Fabricated metal products, machinery equipment and supplies	181.6	289.8	276.8	233.1	195.7	171.9	111.9
Transportation equipment	112.0	170.8	140.2	84.4	82.9	63.4	42.8
Other manufacturing	63.3	100.0	122.1	121.0	141.0	148.2	65.9
Public administration	c	c	72.1	70.0	91.9	91.2	82.7
Unclassified[d]	1,236.9	1,434.9	3,495.4	4,349.3	2,858.4	2,619.4	2,845.9
Total Gas Utility Industry Commercial, Industrial and "Other" sales[a,e]	**6,882.7**	**9,396.8**	**10,173.5**	**10,998.1**	**8,466.9**	**7,059.7**	**6554.0**
Total Commercial, Industrial and "Other" sales of co.'s reporting this table	**6,050.0**	**8,022.9**	**8,786.0**	**7,851.5**	**5,926.7**	**4,886.7**	**3,571.0**
Transfers[a]	**246.2**	**283.6**	**301.6**	**411.1**	**364.5**	**315.3**	**395.5**

a. Includes the quantities of gas for electric generation detailed as "Transfers" which are not included in Total Commercial, Industrial, and "Other" sales of companies reporting this table or in Total Gas Utility Industry sales. Such quantities represent transfers by the gas department to the electric department of combination gas and electric companies.
b. Classification eliminated.
c. New classification in 1972.
d. Difference between total and classified volumes.
e. Includes Industrial and "Other" sales only prior to 1971.
R–Revised.
Note: Prior to 1982 only large volume sales detailed by SIC.

TABLE 6-10
GAS UTILITY INDUSTRY SALES, BY TYPE OF INDUSTRY CLASSIFICATION AND BY DIVISION, 1987

(Trillions of Btu)

Industry Classification	Total U.S.	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Agriculture, forestry and fisheries	18.4	0.2	0.8	4.7	2.8	1.1	0.6	2.3	1.1	4.7
Petroleum and natural gas production	35.4	a	0.1	0.1	16.5	a	0.4	13.3	0.4	4.6
Other mining	5.8	a	0.2	0.7	0.3	3.1	0.1	0.1	0.8	0.5
Electric services[b]	1,908.4	50.9	238.1	7.5	16.4	183.1	5.0	827.4	18.9	561.1
Other transportation, communication, and public utilities	62.8	5.7	14.4	12.7	5.9	1.9	4.2	0.2	5.5	12.2
Hotels, rooming houses, and camps	32.2	1.3	5.1	8.7	2.1	3.5	1.3	0.4	2.1	7.7
Laundries, cleaning and dyeing	24.8	1.0	2.1	7.9	0.7	1.6	1.7	0.4	1.1	8.4
Other services	277.1	12.7	33.4	119.4	21.3	16.6	12.8	4.1	13.6	43.5
Other non-manufacturing	270.9	20.6	34.2	111.3	16.2	35.2	7.5	1.1	10.9	34.0
Food and kindred products	125.1	2.0	17.2	21.9	26.3	15.2	7.8	5.8	1.2	27.6
Textile products, apparel, fabrics, etc.	57.9	2.2	3.2	1.9	0.2	40.9	4.3	0.1	0.1	5.0
Furniture, lumber, and other wood products	24.3	0.1	2.0	4.5	1.0	2.0	1.7	0.7	0.3	12.1
Paper and Allied Products	104.2	3.7	19.1	10.3	2.6	20.1	11.6	6.0	1.2	29.5
Carbon black	1.0	0.0	0.0	a	0.0	0.0	0.8	0.0	0.0	0.1
Chemicals and allied products (except carbon black)	173.5	3.5	20.9	22.0	17.2	24.9	13.8	59.7	1.3	10.3
Petroleum refining	28.7	a	2.1	2.1	1.6	0.1	0.1	7.0	0.3	15.4
Rubber and miscellaneous plastic products	24.9	1.4	3.0	8.2	0.5	6.7	2.3	0.1	0.1	2.6
Glass products	43.3	1.9	16.3	2.6	1.6	10.6	6.5	0.6	a	3.2
Cement	3.3	a	0.2	0.5	0.2	0.3	0.6	0.1	0.2	1.1
Clay products, pottery, etc.	28.8	0.4	1.8	1.7	1.5	16.3	3.4	0.3	0.4	2.9
Other stone products and miscellaneous	25.2	2.2	4.5	4.7	0.4	5.9	2.6	0.8	0.5	3.6
Primary iron and steel industries	78.2	1.0	21.6	36.6	0.7	7.4	6.8	a	0.4	3.7
Primary non-ferrous industries	50.4	1.4	3.5	12.8	3.9	3.7	8.2	0.4	3.1	13.3
Fabricated metal products, machinery equipment and supplies	111.9	7.2	12.9	47.0	8.9	9.7	7.6	4.7	0.8	13.0
Transportation equipment	42.8	1.9	4.0	14.8	6.6	4.5	1.8	a	0.6	8.6
Other manufacturing	65.9	3.0	10.9	19.6	5.0	11.7	5.2	0.7	1.7	8.2
Public administration	82.7	2.1	13.5	14.4	5.9	20.4	6.4	6.1	5.1	8.9
Unclassified	2,845.9	84.3	331.9	349.3	330.3	318.6	172.9	795.9	183.3	279.2
Total Gas Utility Industry Commercial, Industrial and "Other" sales[b]	**6,554.0**	**210.9**	**817.1**	**847.7**	**496.4**	**765.2**	**298.1**	**1,738.4**	**255.0**	**1,125.1**
Total Commercial, Industrial and "Other" sales of co.'s reporting this table	**3,571.0**	**134.5**	**525.0**	**625.1**	**298.1**	**544.4**	**153.8**	**548.2**	**136.6**	**605.3**
Transfers[b]	**395.5**	**4.3**	**193.6**	**1.2**	**3.8**	**10.6**	**a**	**175.9**	**6.1**	**0.0**

[a] Less than 0.05 trillion Btu.

[b] Includes the quantities for electric generation detailed as "Transfers" which are not included in Total Commercial, Industrial and "Other" sales of companies reporting this table or in Total Gas Utility Industry sales. Such quantities represent transfers by the gas department to the electric department of combination gas and electric companies.

TABLE 6-11
GAS CONSUMED FOR ELECTRIC GENERATION,[a] BY STATE, 1965-1987

(Millions of Cubic Feet)

Division and State	1965	1970	1975	1980	1985	1986R	1987
United States	**2,321,101**	**3,931,860**	**3,146,874**	**3,681,595**	**3,044,083**	**2,602,370**	**2,843,082**
New England	**13,918**	**8,133**	**2,523**	**7,001**	**49,346**	**15,618**	**52,884**
Connecticut	337	147	344	0	1,559	740	7,350
Maine	0	0	0	0	0	0	0
Massachusetts	13,098	5,668	1,437	5,083	45,161	14,875	40,183
New Hampshire	0	0	177	0	67	0	15
Rhode Island	483	2,319	11	1,679	2,532	0	5,336
Vermont	0	0	555	239	95	3	0
Middle Atlantic	**97,850**	**161,385**	**23,436**	**206,769**	**235,563**	**171,181**	**250,458**
New Jersey	22,440	45,891	8,601	79,513	61,362	36,877	75,138
New York	74,189	106,141	13,613	124,391	172,631	133,580	173,328
Pennsylvania	1,221	9,354	1,213	2,865	1,570	724	1,993
East North Central	**68,232**	**278,143**	**118,394**	**65,883**	**19,141**	**20,487**	**18,288**
Illinois	34,618	132,382	34,176	19,165	5,881	6,067	3,172
Indiana	13,272	29,507	10,994	1,904	1,117	1,086	1,315
Michigan	2,989	64,270	47,151	26,368	10,126	10,945	1,315
Ohio	2,947	21,380	6,139	4,706	699	606	871
Wisconsin	14,406	30,604	19,935	13,740	1,317	1,783	2,176
West North Central	**303,818**	**420,086**	**264,825**	**143,387**	**27,333**	**21,066**	**28,243**
Iowa	52,238	77,910	46,929	6,835	2,100	1,365	3,276
Kansas	112,955	167,885	127,818	101,022	21,181	15,029	16,062
Minnesota	51,420	58,954	22,709	8,077	1,275	1,734	5,700
Missouri	47,552	62,970	26,320	15,329	1,466	1,182	1,379
Nebraska	36,269	47,641	37,659	11,850	1,284	1,713	1,746
North Dakota	25	362	157	15	2	2	3
South Dakota	3,359	4,364	3,232	259	26	41	77
South Atlantic	**117,395**	**343,408**	**199,105**	**191,409**	**177,934**	**182,994**	**199,769**
Delaware	4,611	3,744	1,697	6,999	7,266	1,796	7,847
District of Columbia	0	0	0	0	0	0	0
Florida	87,001	198,367	141,153	166,047	165,683	169,533	175,675
Georgia	831	58,674	40,282	3,666	885	5,803	826
Maryland	56	11,435	451	5,230	1,372	2,194	11,757
North Carolina	2,895	21,126	101	1,702	595	1,137	1,162
South Carolina	18,801	45,081	14,566	5,418	483	1,386	538
Virginia	2,268	4,276	496	2,285	1,528	847	1,724
West Virginia	932	705	358	62	122	298	239
East South Central	**78,626**	**140,940**	**37,774**	**99,461**	**55,779**	**49,104**	**42,930**
Alabama	5,561	15,444	5,994	1,382	1,078	1,054	1,474
Kentucky	453	8,533	272	1,902	1,121	437	336
Mississippi	56,360	99,710	31,507	95,073	53,579	47,613	41,119
Tennessee	16,252	17,253	0	1,104	0	0	0
West South Central	**1,009,857**	**1,735,541**	**2,042,085**	**2,243,820**	**1,694,726**	**1,600,352**	**1,515,705**
Arkansas	67,510	107,445	31,818	58,863	11,411	28,425	32.057
Louisiana	175,573	331,750	356,130	424,991	285,039	267,862	246,912
Oklahoma	127,231	234,721	300,848	329,940	200,686	197,239	188,093
Texas	639,543	1,061,625	1,353,290	1,430,026	1,197,590	1,106,826	1,048,643
Mountain	**136,442**	**198,745**	**164,636**	**175,032**	**83,716**	**62,810**	**60,848**
Arizona	36,740	58,898	17,693	49,699	41,731	30,607	26,665
Colorado	35,539	51,194	52,930	31,928	4,913	4,650	7,826
Idaho	0	0	18	46	24	5	3
Montana	1,992	2,529	1,059	4,182	468	407	478
Nevada	13,271	25,336	25,152	27,541	8,080	6,592	7,076
New Mexico	43,996	54,894	64,239	56,280	28,133	20,182	18,454
Utah	4,742	3,520	2,725	5,133	235	230	256
Wyoming	163	2,373	819	222	132	138	90
Pacific	**494,963**	**645,478**	**294,105**	**548,833**	**700,545**	**478,759**	**673,958**
Alaska	2,149	8,198	19,619	28,763	34,194	34,409	30,530
California	492,701	636,270	274,483	518,808	666,274	444,226	643,335
Hawaii	0	0	0	0	0	0	0
Oregon	113	1,010	3	321	0	0	0
Washington	0	0	0	941	77	124	93

[a] Includes direct sales by producers to electric utilities as well as sales by the gas utility industry.

R - Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Electric Power Monthly*, December 1987.

TABLE 6-12
GAS UTILITY INDUSTRY GAS USED FOR ELECTRIC GENERATION, 1965-1987[a]

(Trillions of Btu)

	Sales					
	Industrial[b]					
Year	Firm	Interruptible	Other	Total Sales	Transfers[c]	Total Sales and Transfers
1965	1,179.5		308.5	1,488.0	246.2	1,734.2
1966	1,276.2		367.8	1,644.0	260.2	1,904.2
1967	1,386.9		316.7	1,703.6	254.3	1,957.9
1968	1,489.6		381.3	1,870.9	270.9	2,141.8
1969	1,643.9		360.8	2,004.7	232.6	2,237.3
1970	1,877.5		427.5	2,305.0	283.6	2,588.6
1971	853.6	1,083.6	483.4	2,420.6	595.2	3,015.9
1972	956.5	858.4	553.3	2,368.4	549.5	2,917.9
1973	542.8	871.6	511.4	1,925.8	477.2	2,403.0
1974	497.2	812.5	387.9	1,697.6	419.8	2,117.4
1975	374.5	623.4	385.8	1,383.6	301.6	1,685.2
1976	478.1	889.5	d	1,367.6	250.9	1,618.5
1977	489.1	959.6	d	1,448.7	241.1	1,689.8
1978	544.2	854.0	d	1,398.2	187.9	1,586.1
1979	665.2	980.0	d	1,645.2	335.0	1,980.2
1980 R	971.9	1,137.7	d	2,109.6	411.1	2,520.7
1981 R	997.9	1,264.3	d	2,262.2	343.8	2,606.1
1982	775.8	1,157.6	d	1,933.4	367.9	2,301.3
1983	632.2	973.3	d	1,605.5	368.3	1,973.8
1984	670.5	1,079.5	d	1,750.0	405.8	2,155.8
1985	835.4	1,113.3	d	1,948.7	364.5	2,313.2
1986 R	681.0	766.1	d	1,447.1	315.3	1,762.4
1987	581.4	927.7	d	1,509.1	395.5	1,904.6

a. Excludes direct sales by producers to electric utilities.
b. No breakdown available prior to 1971.
c. Represents transfers by the gas department to the electric department of combination gas and electric companies.
d. Other now included with Industrial to conform to the definition of industrial services.
R - Revised.

TABLE 6-13
GAS UTILITY INDUSTRY GAS USED FOR ELECTRIC GENERATION, BY STATE, 1987[a]

(Trillions of Btu)

Division of State	Industrial Sales Firm	Industrial Sales Interruptible	Industrial Sales Total	Transfers[b]	Total Sales and Transfers
United States	**581.4**	**927.7**	**1,509.1**	**395.5**	**1,904.6**
New England	**0.2**	**46.4**	**46.6**	**4.3**	**50.9**
Connecticut	0.0	1.6	1.6	4.3	5.9
Maine	0.0	0.0	0.0	0.0	0.0
Massachusetts	0.2	40.7	40.9	0.0	40.9
New Hampshire	0.0	0.0	0.0	0.0	0.0
Rhode Island	0.0	4.1	4.1	0.0	4.1
Vermont	0.0	0.0	0.0	0.0	0.0
Middle Atlantic	**0.9**	**43.2**	**44.1**	**193.6**	**237.7**
New Jersey	0.7	23.6	24.3	51.5	75.8
New York	0.1	19.2	19.2	142.1	161.3
Pennsylvania	0.1	0.4	0.6	0.0	0.6
East North Central	**1.9**	**3.4**	**5.3**	**1.2**	**6.5**
Illinois	0.7	1.5	2.2	c	2.3
Indiana	0.3	0.0	0.3	1.1	1.4
Michigan	0.3	0.5	0.8	0.0	0.8
Ohio	0.5	0.1	0.6	0.0	0.6
Wisconsin	0.1	1.3	1.4	0.0	1.4
West North Central	**5.9**	**6.6**	**12.5**	**3.8**	**16.4**
Iowa	0.4	1.0	1.4	1.7	3.1
Kansas	3.4	1.8	5.2	0.0	5.2
Minnesota	c	2.6	2.6	1.7	4.4
Missouri	1.6	0.4	2.0	0.4	2.4
Nebraska	0.5	0.7	1.2	0.0	1.2
North Dakota	0.0	c	c	0.0	c
South Dakota	0.0	0.1	0.1	0.0	0.1
South Atlantic	**1.2**	**171.1**	**172.3**	**10.6**	**182.9**
Delaware	1.1	0.0	1.1	5.5	6.6
District of Columbia	0.0	0.0	0.0	0.0	0.0
Florida	0.1	152.8	152.9	0.0	152.9
Georgia	0.0	2.3	2.3	0.0	2.3
Maryland	0.1	7.3	7.4	4.8	12.2
North Carolina	0.0	1.0	1.0	0.0	1.0
South Carolina	0.0	0.1	0.1	0.3	0.4
Virginia	0.0	0.0	0.0	0.0	0.0
West Virginia	0.0	7.5	7.5	0.0	7.5
East South Central	**3.6**	**1.3**	**5.0**	**c**	**5.0**
Alabama	c	0.2	0.2	0.0	0.2
Kentucky	0.0	0.0	0.0	c	c
Mississippi	3.6	1.1	4.7	0.0	4.7
Tennessee	0.0	c	c	0.0	c
West South Central	**538.7**	**112.8**	**651.5**	**175.9**	**827.4**
Arkansas	0.1	c	0.1	0.0	0.1
Louisiana	18.3	20.3	38.7	32.7	71.4
Oklahoma	c	1.2	1.2	74.3	75.5
Texas	520.3	91.3	611.5	68.9	680.4
Mountain	**11.6**	**1.2**	**12.8**	**6.1**	**18.9**
Arizona	6.9	0.1	7.0	0.0	7.0
Colorado	0.9	0.8	1.7	4.1	5.7
Idaho	0.0	0.0	0.0	0.0	0.0
Montana	0.0	c	c	0.5	0.5
Nevada	1.8	0.0	1.8	1.5	3.4
New Mexico	1.8	0.0	1.8	0.0	1.8
Utah	0.0	0.3	0.3	0.0	0.3
Wyoming	0.2	c	0.2	0.0	0.2
Pacific	**17.3**	**541.6**	**558.9**	**0.0**	**558.9**
Alaska	0.0	16.9	16.9	0.0	16.9
California	17.3	524.7	542.0	0.0	542.0
Hawaii	0.0	0.0	0.0	0.0	0.0
Oregon	0.0	0.0	0.0	0.0	0.0
Washington	c	0.0	c	0.0	c

a. Excludes direct sales by producers to electric utilities.

b. Volumes transferred by the gas department to the electric department of combination gas and electric companies.

c. Less than 0.05 trillion Btu.

SALES—QUANTITIES

TABLE 6-14
TOTAL LIQUEFIED PETROLEUM GAS SALES BY CONSUMING SECTOR
1965-1986[a]

(Trillions of Btu)

Year	Total	Sector			
		Residential	Commercial	Industrial	Transportation
1965	1,231.8	434.0	76.6	697.0	24.3
1966	1,299.3	461.2	81.4	734.0	22.7
1967	1,322.0	483.3	85.3	732.9	20.5
1968	1,472.8	519.1	91.6	839.9	22.1
1969	1,695.6	589.6	104.1	975.9	26.1
1970	1,688.5	578.9	102.2	981.1	26.4
1971	1,722.9	585.4	103.3	1,003.8	30.3
1972	1,954.6	628.0	110.8	1,179.1	36.7
1973	1,980.7	594.8	105.0	1,242.0	39.0
1974	1,913.8	545.9	96.3	1,230.7	40.9
1975	1,807.1	527.8	93.1	1,148.8	37.4
1976	1,907.3	549.2	96.9	1,223.1	38.0
1977	1,907.9	533.5	94.1	1,243.8	36.5
1978	1,891.9	516.4	91.1	1,255.2	29.2
1979	2,138.1	354.8	62.6	1,707.8	12.9
1980	1,976.0	325.1	57.4	1,576.1	17.4
1981	1,948.9	310.9	54.9	1,561.4	21.7
1982	1,978.4	296.1	52.3	1,601.2	28.9
1983	1,990.2	352.4	62.2	1,538.2	37.4
1984	2,071.2	379.0	66.9	1,576.4	49.0
1985	2,102.8	422.5	74.6	1,554.5	51.2
1986	2,009.5	413.0	72.9	1,478.5	45.1

[a] Liquefied petroleum gases include ethane, ethylene, propane, propylene, butane, butylene, butane-propane mixture, ethane-propane mixture, and isobutane. The 1979-1986 LPG data may not be directly comparable to the pre-1979 data due to modifications to the LPG sales survey form and an updated sampling frame.

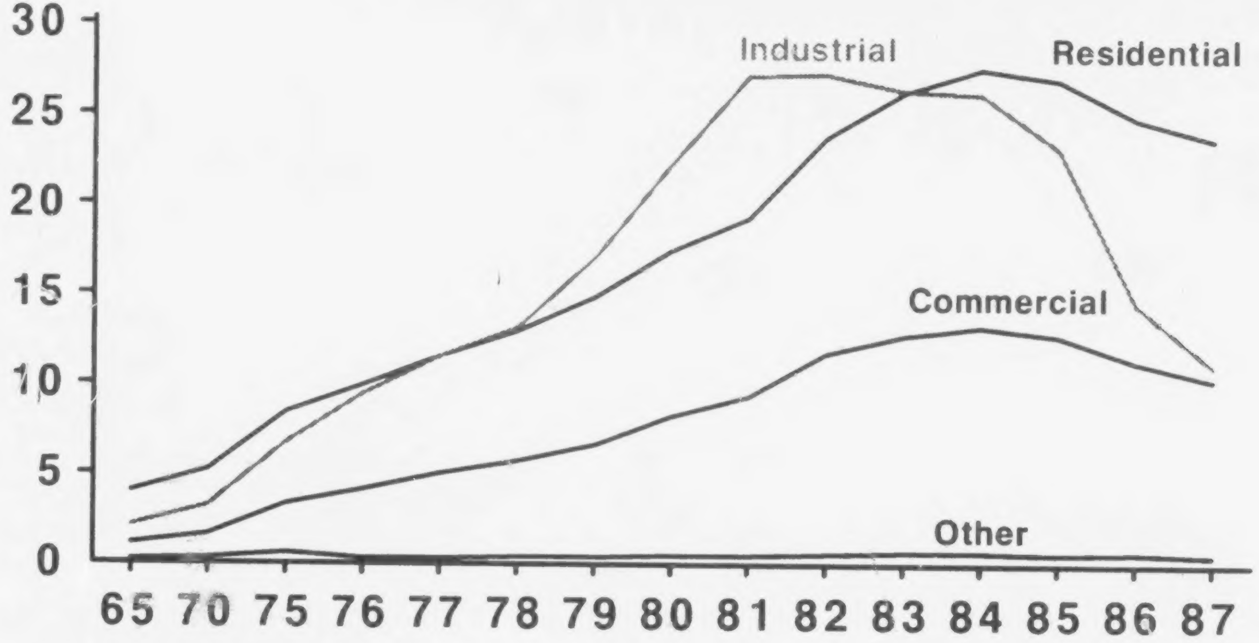
Source: U.S. Department of Energy, Energy Information Administration, *State Energy Data Reports.*

SECTION 7
REVENUES

	1987	% Change 87/86
Gas Utility Industry		
(Thousands)		
Total Revenues (From sales)	$45,491,924	−11.2
Residential	23,621,876	− 4.6
Commercial	10,271,326	− 8.9
Industrial	11,069,055	−23.6
Industrial Only	7,278,931	−31.0
Electric Generation	3,790,124	− 3.8
Other	529,667	−21.3
Resale	$21,695,759	−20.4

CHART 7-1

GAS UTILITY INDUSTRY REVENUES BY CLASS OF SERVICE
(BILLIONS OF DOLLARS)



REFERENCE: TABLE 7-1

REVENUES

TABLE 7-1
GAS UTILITY INDUSTRY REVENUES, BY CLASS OF SERVICE, 1965-1987

(Thousands)

Year	Total	Residential	Commercial	Industrial[a]	Other[a]
1965	$ 7,406,978	$ 4,029,562	$ 1,053,647	$ 2,147,958	$175,811
1966	7,869,888	4,195,331	1,135,352	2,334,654	204,551
1967	8,260,739	4,382,837	1,223,897	2,460,885	193,120
1968	8,781,152	4,567,307	1,315,409	2,675,261	223,175
1969	9,479,566	4,883,029	1,459,054	2,918,973	218,510
1970	10,282,611	5,207,335	1,620,446	3,181,206	273,624
1971	11,357,392	5,635,395	1,829,309	3,568,582	324,106
1972	12,465,235	6,094,171	2,063,803	3,943,011	364,250
1973	12,987,272	6,246,988	2,172,460	4,196,714	371,110
1974	15,242,481	6,899,395	2,539,300	5,391,139	412,647
1975	19,101,498	8,445,484	3,302,669	6,745,171	608,174
1976	23,701,211	9,941,013	4,075,009	9,434,751	250,438
1977	28,303,200	11,540,805	4,979,890	11,454,675	327,830
1978	32,149,921	12,938,865	5,695,666	13,138,576	376,814
1979	38,947,143	14,832,950	6,623,766	17,044,820	445,607
1980[R]	48,302,986	17,432,094	8,183,432	22,239,982	447,478
1981[R]	56,109,859	19,180,238	9,285,549	27,123,865	520,207
1982	63,199,775	23,699,899	11,666,099	27,200,015	633,762
1983	65,836,669	26,173,122	12,658,718	26,314,873	689,956
1984	67,496,298	27,484,877	13,205,106	26,093,776	712,539
1985	63,292,552	26,864,099	12,722,134	23,085,833	620,486
1986[R]	51,200,810	24,759,281	11,273,843	14,494,725	672,961
1987	45,491,924	23,621,876	10,271,326	11,069,055	529,667

[a] Prior to 1976 "Other" electric generation (refer to Table 7-10) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.

R–Revised.

TABLE 7-2
GAS UTILITY INDUSTRY REVENUES, BY QUARTER AND CLASS OF SERVICE
1965-1987

(Thousands)

Year and Quarter	Total	Residential	Commercial	Industrial[a]	Other[a]
1965					
First	$ 2,688,389	$ 1,667,580	$ 438,864	$ 528,598	$ 53,347
Second	1,713,833	909,991	230,269	535,235	38,338
Third	1,151,283	461,313	121,320	531,538	37,112
Fourth	1,847,096	986,096	261,769	552,222	47,009
1970					
First	3,742,316	2,197,999	687,117	780,927	76,273
Second	2,342,672	1,136,333	346,748	797,906	61,685
Third	1,624,621	578,747	182,163	803,503	60,208
Fourth	2,573,002	1,294,256	404,418	798,870	75,458
1975					
First	6,192,706	3,303,345	1,241,301	1,507,088	140,972
Second	4,449,583	1,972,484	734,977	1,625,673	116,449
Third	3,396,905	987,079	438,873	1,783,838	187,115
Fourth	5,062,304	2,182,576	887,518	1,828,572	163,638
1980[R]					
First	16,451,183	7,338,136	3,246,038	5,698,318	168,691
Second	10,079,782	3,383,415	1,567,534	5,045,581	83,252
Third	8,578,869	1,785,894	1,036,782	5,690,536	65,657
Fourth	13,193,152	4,924,649	2,333,078	5,805,547	129,878
1981[R]					
First	18,801,868	8,306,949	3,745,524	6,558,875	190,520
Second	12,100,479	3,431,509	1,700,872	6,864,140	103,958
Third	10,093,166	1,953,490	1,174,407	6,886,530	78,739
Fourth	15,114,346	5,488,290	2,664,746	6,814,320	146,990
1982					
First	22,716,502	10,471,317	4,812,798	7,199,859	232,528
Second	13,208,177	4,427,895	2,205,520	6,459,704	115,058
Third	10,788,316	2,372,937	1,455,682	6,868,834	90,863
Fourth	16,486,780	6,427,750	3,192,099	6,671,618	195,313
1983					
First	23,039,000	10,804,224	5,020,783	6,950,292	263,701
Second	14,587,145	5,598,036	2,665,010	6,176,141	147,958
Third	10,920,330	2,597,847	1,544,337	6,682,247	95,899
Fourth	17,290,194	7,173,015	3,428,588	6,506,193	182,398
1984					
First	25,546,562	12,465,689	5,734,074	7,050,372	296,427
Second	14,279,409	5,321,699	2,579,755	6,245,386	132,569
Third	10,848,608	2,687,920	1,553,057	6,523,808	83,823
Fourth	16,821,719	7,009,569	3,338,220	6,274,210	199,720
1985					
First	24,901,945	12,459,204	5,675,345	6,517,019	268,377
Second	12,186,443	4,597,373	2,221,153	5,255,653	112,264
Third	9,790,920	2,658,158	1,468,241	5,591,635	72,886
Fourth	16,413,244	7,149,364	3,375,395	5,721,526	166,959
1986[R]					
First	21,148,759	11,158,610	5,043,862	4,709,532	236,755
Second	9,938,670	4,385,310	1,991,030	3,404,542	157,788
Third	7,048,578	2,541,541	1,271,234	3,133,258	102,545
Fourth	13,064,803	6,673,820	2,967,717	3,247,393	175,873
1987					
First	17,844,737	10,239,597	4,359,301	3,034,286	211,553
Second	9,096,631	4,486,852	1,903,621	2,600,063	106,095
Third	6,482,781	2,508,681	1,209,598	2,691,831	72,671
Fourth	12,067,775	6,386,746	2,798,806	2,742,875	139,348

[a] Prior to 1976 "Other" electric generation (see Table 7-9) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.

R - Revised.

REVENUES

TABLE 7-3
GAS UTILITY INDUSTRY REVENUES, BY STATE
1965-1987[a]

(Thousands)

Division and State	1965	1970	1975	1980[R]	1985	1986[R]	1987
United States	**$7,406,978**	**$10,282,611**	**$19,101,498**	**$48,302,986**	**$63,292,552**	**$51,200,810**	**$45,491,924**
New England	**274,937**	**377,666**	**700,071**	**1,479,112**	**2,289,149**	**2,053,700**	**2,042,294**
Connecticut	66,653	98,178	178,480	366,348	572,431	550,531	539,908
Maine	3,845	4,013	5,983	11,156	19,318	17,945	17,630
Massachusetts	171,040	228,224	425,411	905,414	1,388,928	1,200,111	1,199,713
New Hampshire	7,336	10,328	17,190	40,569	71,173	68,331	72,095
Rhode Island	185,820	34,360	65,982	132,190	207,349	189,819	185,820
Vermont	1,464	2,563	7,025	23,435	29,950	26,963	27,128
Middle Atlantic	**1,342,428**	**1,753,799**	**2,940,846**	**6,603,468**	**9,466,303**	**8,634,891**	**7,782,705**
New Jersey	268,622	372,672	594,560	1,408,766	2,144,776	2,004,360	1,918,489
New York	570,984	720,609	1,248,149	2,663,655	4,198,569	3,833,287	3,384,776
Pennsylvania	502,822	660,518	1,098,137	2,531,047	3,122,958	2,797,244	2,479,440
East North Central	**1,995,933**	**2,888,886**	**5,033,327**	**11,584,266**	**15,254,866**	**12,864,253**	**10,238,710**
Illinois	555,763	829,369	1,504,405	3,588,046	4,546,146	3,954,573	3,043,150
Indiana	218,436	356,270	530,454	1,341,428	1,881,958	1,571,647	1,191,948
Michigan	434,292	651,318	1,269,106	2,692,792	3,779,438	2,965,390	2,384,851
Ohio	625,011	789,008	1,254,154	2,875,396	3,413,729	3,032,971	2,560,097
Wisconsin	162,431	262,921	475,208	1,176,604	1,633,595	1,339,672	1,058,664
West North Central	**701,789**	**982,976**	**1,585,864**	**3,778,158**	**5,272,430**	**4,356,593**	**3,500,170**
Iowa	127,197	180,607	311,364	718,370	998,934	836,090	608,321
Kansas	125,238	178,128	282,119	815,547	937,324	726,500	614,154
Minnesota	156,680	218,398	352,170	750,995	1,277,197	1,068,779	817,895
Missouri	187,021	267,726	406,752	992,492	1,277,040	1,103,744	943,416
Nebraska	77,722	101,542	169,010	356,352	536,737	414,124	345,545
North Dakota	10,566	15,540	31,037	77,168	119,167	102,503	89,004
South Dakota	17,365	21,035	33,412	67,234	126,031	104,853	81,835
South Atlantic	**631,577**	**941,975**	**1,538,752**	**4,112,603**	**5,787,396**	**5,095,965**	**5,089,378**
Delaware	15,881	22,672	33,229	78,336	124,740	115,218	99,525
District of Columbia	29,602	34,635	54,671	120,837	205,515	203,788	190,082
Florida	73,357	120,609	146,526	611,114	910,783	701,026	869,499
Georgia	127,728	191,637	349,550	950,915	1,436,103	1,221,603	1,178,030
Maryland	113,321	163,999	272,830	598,324	780,472	755,235	703,257
North Carolina	54,773	106,051	165,659	495,459	670,080	608,360	636,263
South Carolina	42,736	74,858	130,662	354,351	480,164	421,647	446,707
Virginia	89,235	126,840	206,109	482,080	736,868	669,034	609,650
West Virginia	84,944	100,674	179,516	421,187	442,671	400,054	356,365
East South Central	**365,717**	**509,350**	**775,705**	**2,306,090**	**2,846,738**	**2,293,208**	**2,026,877**
Alabama	113,647	149,962	237,710	698,762	860,907	718,839	606,982
Kentucky	91,310	127,787	199,738	509,455	694,725	545,376	472,809
Mississippi	68,331	100,383	134,730	517,786	554,370	413,804	359,621
Tennessee	92,429	131,218	203,527	580,087	736,736	615,189	587,465
West South Central	**771,223**	**1,066,433**	**2,953,148**	**8,951,915**	**9,062,862**	**6,864,686**	**5,756,114**
Arkansas	83,252	125,928	175,862	408,334	559,821	410,797	368,823
Louisiana	165,926	219,303	386,609	1,215,482	1,118,878	780,850	802,200
Oklahoma	103,263	127,367	328,817	965,728	982,583	621,142	542,880
Texas	418,782	593,835	2,061,860	6,362,371	6,401,580	5,051,897	4,042,211
Mountain	**325,757**	**456,593**	**920,668**	**2,393,490**	**3,050,419**	**2,269,551**	**2,115,636**
Arizona	65,722	95,423	171,773	384,777	573,729	338,220	344,025
Colorado	88,404	120,563	241,901	713,628	907,835	759,053	717,535
Idaho	19,776	28,990	75,818	182,600	171,432	106,651	93,628
Montana	32,003	42,871	82,021	163,917	204,292	155,632	136,492
Nevada	17,544	32,383	79,858	196,982	226,256	158,474	144,845
New Mexico	43,638	56,975	125,617	333,855	351,053	267,326	236,634
Utah	43,572	55,273	101,164	284,725	453,012	359,651	341,011
Wyoming	15,098	24,115	42,516	133,006	162,810	124,544	101,466
Pacific	**997,617**	**1,304,933**	**2,653,117**	**7,093,884**	**10,262,389**	**6,767,963**	**6,940,040**
Alaska	4,575	11,678	24,829	38,725	95,581	106,977	100,243
California	875,876	1,117,573	2,193,048	6,076,193	8,969,857	5,750,067	6,005,674
Hawaii	6,053	7,714	24,125	45,162	44,305	37,465	38,556
Oregon	42,169	65,096	156,703	354,502	432,989	321,391	318,050
Washington	68,944	102,872	254,412	579,302	719,657	552,063	477,517

a. Excludes revenues from sales for resale.

R-Revised.

TABLE 7-4
GAS UTILITY INDUSTRY REVENUES FROM GAS FOR RESALE, BY STATE, 1965-1987

(Thousands)

Division and State	1965[a]	1970	1975	1980[R]	1985	1986	1987
United States	**$4,255,066**	**$6,217,662**	**$11,573,752**	**$37,900,088**	**$39,772,658**	**$27,243,450**	**21,695,759**
New England	**110,807**	**168,196**	**382,550**	**851,449**	**1,196,319**	**920,749**	**954,706**
Connecticut		51,891	125,226	222,022	276,241	221,372	215,774
Maine		0	0	0	0	0	0
Massachusetts		94,590	216,069	529,965	770,323	576,374	517,855
New Hampshire		5,319	5,744	17,577	33,292	26,566	134,663
Rhode Island		16,396	34,645	81,885	116,463	96,437	86,414
Vermont		0	866	0	0	0	0
Middle Atlantic	**777,878**	**1,057,060**	**1,761,307**	**5,815,523**	**6,604,685**	**4,765,072**	**4,006,322**
New Jersey		215,211	365,302	1,250,773	1,500,354	1,151,209	1,106,387
New York		371,895	532,961	1,829,091	2,273,815	1,531,036	1,239,036
Pennsylvania		469,951	863,044	2,735,659	2,830,516	2,082,827	1,660,899
East North Central	**1,151,990**	**1,940,570**	**3,596,246**	**10,687,835**	**11,510,873**	**8,192,807**	**5,545,810**
Illinois		529,299	1,041,633	3,412,478	4,020,673	2,797,463	1,685,208
Indiana		188,301	292,665	988,871	1,310,034	1,234,469	869,433
Michigan		278,232	659,019	1,804,423	1,471,009	875,090	618,345
Ohio		756,382	1,144,706	3,145,106	3,199,641	2,229,990	1,681,530
Wisconsin		188,355	458,223	1,336,957	1,509,516	1,055,795	691,294
West North Central	**306,416**	**439,274**	**803,046**	**2,198,971**	**3,285,293**	**2,739,928**	**2,048,626**
Iowa		105,106	202,852	517,052	613,404	537,913	319,608
Kansas		52,935	89,538	265,146	380,686	292,469	273,894
Minnesota		100,758	178,677	554,425	885,481	766,472	526,978
Missouri		127,783	231,990	628,970	941,573	756,547	619,817
Nebraska		42,394	77,384	174,217	292,336	243,591	195,386
North Dakota		2,186	7,695	22,277	72,384	63,301	52,486
South Dakota		8,114	14,910	36,884	99,429	79,635	60,457
South Atlantic	**597,386**	**748,392**	**1,094,146**	**3,580,787**	**3,882,772**	**2,734,039**	**2,225,417**
Delaware		680	1,170	2,180	8,041	6,498	4,728
District of Columbia		0	0	0	0	0	0
Florida		24,297	54,786	218,749	304,365	222,042	264,062
Georgia		122,268	217,592	709,353	1,091,463	735,816	594,545
Maryland		81,983	159,003	480,609	484,449	413,111	287,755
North Carolina		38,167	96,134	440,145	520,029	372,000	354,161
South Carolina		75,078	86,854	313,732	344,559	246,310	222,254
Virginia		99,200	177,878	542,737	722,299	557,467	277,214
West Virginia		306,719	300,729	873,282	407,567	180,795	220,698
East South Central	**348,642**	**495,572**	**752,002**	**2,695,523**	**2,882,411**	**1,980,694**	**1,482,775**
Alabama		79,205	140,282	495,051	670,921	403,144	291,796
Kentucky		156,277	169,609	528,686	609,693	400,220	322,134
Mississippi		92,771	163,268	632,103	490,749	287,433	227,116
Tennessee		167,320	278,843	1,039,683	1,111,048	889,897	641,729
West South Central	**236,059**	**324,987**	**765,273**	**4,313,620**	**2,836,863**	**1,758,547**	**1,793,036**
Arkansas		6,684	9,328	25,469	37,353	31,399	51,994
Louisiana		192,241	354,067	1,383,886	966,312	578,286	567,248
Oklahoma		33,698	91,809	422,361	190,649	78,885	51,533
Texas		92,363	310,069	2,481,904	1,642,549	1,069,977	1,122,261
Mountain	**437,321**	**622,947**	**1,349,007**	**4,434,173**	**5,270,940**	**2,734,085**	**2,144,611**
Arizona		482,102	935,305	3,093,184	3,685,562	1,587,397	1,176,118
Colorado		65,331	163,200	657,917	706,735	548,366	507,308
Idaho		24,852	96,221	228,724	184,861	101,202	99,425
Montana		3,435	7,289	25,957	72,458	56,621	47,777
Nevada		2,950	12,147	36,042	51,030	38,340	37,359
New Mexico		20,924	34,447	111,849	112,829	37,723	33,296
Utah		4,186	3,113	15,333	277,426	235,792	189,308
Wyoming		19,168	97,285	265,167	180,039	128,644	54,020
Pacific	**288,567**	**420,664**	**1,070,175**	**3,322,207**	**2,302,502**	**1,417,529**	**1,494,456**
Alaska		0	0	22,677	0	0	0
California		249,666	294,546	1,199,764	572,465	388,932	387,666
Hawaii		0	0	0	0	0	0
Oregon		120,229	598,295	1,665,022	1,264,807	753,600	881,038
Washington		50,769	177,334	434,744	465,230	274,997	225,752

a. Includes natural gas only prior to 1970 and state breakdowns not available prior to 1970.
R – Revised.

TABLE 7-5
GAS UTILITY INDUSTRY REVENUES, BY STATE AND CLASS OF SERVICE, 1987

(Thousands)

Division and State	Total	Class of Service Residential	Commercial	Industrial	Electric Generation	Other
United States	**$45,491,924**	**$23,621,876**	**$10,271,326**	**$7,278,931**	**$3,790,124**	**$529,667**
New England	**2,042,294**	**1,116,126**	**550,977**	**250,390**	**110,485**	**14,316**
Connecticut	539,908	303,396	150,794	85,274	46	398
Maine	17,630	4,240	8,725	4,665	0	0
Massachusetts	1,199,713	644,854	318,759	122,794	100,859	12,447
New Hampshire	72,095	37,466	26,824	6,987	0	818
Rhode Island	185,820	114,332	36,593	24,827	9,580	488
Vermont	27,128	11,838	9,282	5,843	0	165
Middle Atlantic	**7,782,705**	**4,888,158**	**1,722,919**	**889,822**	**120,871**	**160,935**
New Jersey	1,918,489	1,108,740	515,430	231,223	61,875	1,221
New York	3,384,776	2,271,520	639,506	299,681	57,700	116,369
Pennsylvania	2,479,440	1,507,898	567,983	358,918	1,296	43,345
East North Central	**10,238.710**	**6,635,854**	**2,349,087**	**1,197,777**	**19,154**	**36,838**
Illinois	3,043,150	1,922,903	724,049	387,626	8,076	496
Indiana	1,191,948	693,396	267,837	223,051	1,021	6,643
Michigan	2,384,851	1,665,989	534,267	180,821	3,229	545
Ohio	2,560,097	1,734,009	591,510	205,895	1,910	26,773
Wisconsin	1,058,664	619,557	231,424	200,384	4,918	2,381
West North Central	**3,500,170**	**1,819,036**	**952,142**	**679,786**	**32,411**	**16,795**
Iowa	608,321	310,761	147,277	145,492	3,524	1,267
Kansas	614,154	280,713	145,344	168,119	13,605	6,373
Minnesota	817,895	415,801	202,502	191,022	5,552	3,018
Missouri	943,416	552,046	277,303	102,521	6,178	5,368
Nebraska	345,545	171,617	114,098	55,940	3,322	568
North Dakota	89,004	44,128	40,157	4,654	62	3
South Dakota	81,835	43,970	25,461	12,038	168	198
South Atlantic	**5,089,378**	**2,174,962**	**1,257,537**	**1,160,235**	**465,193**	**31,451**
Delaware	99,525	44,736	19,253	32,941	2,435	160
District of Columbia	190,082	90,554	99,528	0	0	0
Florida	869,499	107,502	163,542	170,273	418,649	9,533
Georgia	1,178,030	622,280	281,547	267,412	4,950	1,841
Maryland	703,257	423,501	163,104	96,955	19,523	174
North Carolina	636,263	239,094	147,684	243,034	3,397	3,054
South Carolina	446,707	131,002	94,417	219,328	402	1,558
Virginia	609,650	297,335	199,753	104,679	0	7,883
West Virginia	356,365	218,958	88,709	25,613	15,837	7,248
East South Central	**2,026,877**	**941,485**	**507,057**	**514,361**	**15,561**	**48,413**
Alabama	606,982	310,289	137,089	155,114	596	3,894
Kentucky	472,809	272,412	117,573	64,885	0	17,939
Mississippi	359,621	156,582	68,598	98,323	14,860	21,258
Tennessee	587,465	202,202	183,797	196,039	105	5,322
West South Central	**5,756,114**	**1,911,791**	**885,132**	**1,283,880**	**1,504,966**	**170,345**
Arkansas	368,823	185,162	103,678	78,789	383	811
Louisiana	802,200	331,087	113,901	222,231	75,198	59,783
Oklahoma	542,880	306,051	136,462	95,297	3,519	1,551
Texas	4,042,211	1,089,491	531,091	887,563	1,425,866	108,200
Mountain	**2,115,636**	**1,152,979**	**657,170**	**226,969**	**38,692**	**39,826**
Arizona	344,025	172,027	111,133	33,750	20,379	6,736
Colorado	717,535	403,326	249,730	58,145	4,853	1,481
Idaho	93,628	39,717	32,334	21,577	0	0
Montana	136,492	68,352	42,934	20,221	78	4,907
Nevada	144,845	73,840	55,651	6,862	6,917	1,575
New Mexico	236,634	137,044	53,646	15,858	5,112	24,974
Utah	341,011	207,818	74,349	57,772	932	140
Wyoming	101,466	50,855	37,393	12,784	421	13
Pacific	**6,940,040**	**2,981,485**	**1,389,305**	**1,075,711**	**1,482,791**	**10,748**
Alaska	100,243	39,110	29,334	0	31,799	0
California	6,005,674	2,648,604	1,112,675	783,996	1,450,974	9,425
Hawaii	38,556	9,244	16,044	13,268	0	0
Oregon	318,050	121,999	87,611	108,440	0	0
Washington	477,517	162,528	143,641	170,007	18	1,323

TABLE 7-6
GAS UTILITY INDUSTRY FIRM AND INTERRUPTIBLE GAS REVENUES, BY STATE, 1987

(Thousands)

Division and State	Commercial			Industrial[a]		
	Total	Firm	Interruptible	Total	Firm	Interruptible
United States	**$10,271,326**	**9,732,894**	**538,432**	**7,278,931**	**3,613,930**	**3,665,001**
New England	**550,977**	**489,985**	**60,992**	**250,390**	**150,833**	**99,557**
Connecticut	150,794	121,674	29,120	85,274	46,981	38,293
Maine	8,725	7,278	1,447	4,665	4,293	372
Massachusetts	318,759	288,430	30,329	122,794	81,075	41,719
New Hampshire	26,824	26,728	96	6,987	3,944	3,043
Rhode Island	36,593	36,593	0	24,827	14,540	10,287
Vermont	9,282	9,282	0	5,843	0	5,843
Middle Atlantic	**1,722,919**	**1,629,612**	**93,307**	**889,822**	**581,772**	**308,050**
New Jersey	515,430	474,440	40,990	231,223	124,052	107,171
New York	639,506	627,640	11,866	299,681	204,769	94,912
Pennsylvania	567,983	527,532	40,451	358,918	252,951	105,967
East North Central	**2,349,087**	**2,315,539**	**33,548**	**1,197,777**	**973,894**	**223,883**
Illinois	724,049	718,128	5,921	387,626	306,789	80,837
Indiana	267,837	255,277	12,560	223,051	155,108	67,943
Michigan	534,267	532,989	1,278	180,821	155,719	25,102
Ohio	591,510	590,040	1,470	205,895	197,667	8,228
Wisconsin	231,424	219,105	12,319	200,384	158,611	41,773
West North Central	**952,142**	**879,646**	**72,496**	**679,786**	**336,830**	**342,956**
Iowa	147,277	129,206	18,071	145,492	106,777	38,715
Kansas	145,344	142,373	2,971	168,119	59,102	109,017
Minnesota	202,502	188,192	14,310	191,022	58,942	132,080
Missouri	277,303	261,443	15,860	102,521	85,315	17,206
Nebraska	114,098	105,593	8,505	55,940	22,814	33,126
North Dakota	40,157	30,468	9,689	4,654	53	4,601
South Dakota	25,461	22,371	3,090	12,038	3,827	8,211
South Atlantic	**1,257,537**	**1,127,390**	**130,147**	**1,160,235**	**467,432**	**692,803**
Delaware	19,253	18,740	513	32,941	21,224	11,717
District of Columbia	99,528	72,713	26,815	0	0	0
Florida	163,542	151,881	11,661	170,273	17,795	152,478
Georgia	281,547	278,964	2,583	267,412	71,770	195,642
Maryland	163,104	130,230	32,874	96,955	77,450	19,505
North Carolina	147,684	143,579	4,105	243,034	121,930	121,104
South Carolina	94,417	74,841	19,576	219,328	87,078	132,250
Virginia	199,753	171,306	28,447	104,679	49,050	55,629
West Virginia	88,709	85,136	3,573	25,613	21,135	4,478
East South Central	**507,057**	**482,841**	**24,216**	**514,361**	**341,985**	**172,376**
Alabama	137,089	123,516	13,573	155,114	83,806	71,308
Kentucky	117,573	113,374	4,199	64,885	44,489	20,396
Mississippi	68,598	68,588	10	98,323	92,080	6,243
Tennessee	183,797	177,363	6,434	196,039	121,610	74,429
West South Central	**885,132**	**864,267**	**20,865**	**1,283,880**	**467,683**	**816,197**
Arkansas	103,678	86,330	17,348	78,789	53,924	24,865
Louisiana	113,901	113,557	344	222,231	120,396	101,835
Oklahoma	136,462	135,094	1,368	95,297	50,616	44,681
Texas	531,091	529,286	1,805	887,563	242,747	644,816
Mountain	**657,170**	**652,981**	**4,189**	**226,969**	**127,263**	**99,706**
Arizona	111,133	110,140	993	33,750	32,991	759
Colorado	249,730	248,223	1,507	58,145	20,403	37,742
Idaho	32,334	32,334	0	21,577	20,197	1,380
Montana	42,934	42,520	414	20,221	3,492	16,729
Nevada	55,651	55,651	0	6,862	6,862	0
New Mexico	53,646	52,593	1,053	15,858	15,455	403
Utah	74,349	74,349	0	57,772	20,368	37,404
Wyoming	37,393	37,171	222	12,784	7,495	5,289
Pacific	**1,389,305**	**1,290,633**	**98,672**	**1,075,711**	**166,238**	**909,473**
Alaska	29,334	29,334	0	0	0	0
California	1,112,675	1,052,030	60,645	783,996	65,026	718,970
Hawaii	16,044	14,659	1,385	13,268	13,268	0
Oregon	87,611	87,084	527	108,440	34,129	74,311
Washington	143,641	107,526	36,115	170,007	53,815	116,192

[a] Does not include electric generation.

REVENUES

TABLE 7-7
REVENUES FROM GAS UTILITY INDUSTRY SALES, BY TYPE OF INDUSTRY CLASSIFICATION, 1965–1987

(Thousands)

Industry Classification	1965	1970	1975	1980^{R}	1985	1986^{R}	1987
Agriculture, forestry and fisheries	$ 4,553	$ 13,373	$ 41,816	$ 137,952	$ 208,390	$ 144,398	$ 75,258
Petroleum and natural gas production	23,092	29,116	67,556	90,824	229,276	129,144	108,474
Other mining	18,697	18,744	44,664	214,732	111,223	64,831	19,978
Electric services[a]	461,037	750,879	1,482,516	6,750,928	8,693,019	4,691,501	4,718,438
Other transportation, communication, and public utilities	12,867	36,820	99,971	276,149	408,828	282,094	235,304
Hotels, rooming houses, and camps	12,317	34,089	85,216	97,974	193,306	191,491	161,354
Laundries, cleaning and dyeing	7,969	12,508	30,095	76,146	164,781	163,630	130,185
Other services	25,434	82,737	274,992	1,025,544	1,892,707	1,654,918	1,228,223
Other non-manufacturing	32,472	105,186	228,982	571,193	1,624,996	1,684,049	1,382,687
Ordnance	5,938	14,216	b	b	b	b	b
Food and kindred products	88,419	140,016	352,172	991,498	1,135,245	757,839	441,980
Textile products, apparel, fabrics, etc	16,613	32,563	58,468	191,077	270,267	230,524	224,037
Furniture, lumber, and other wood products	18,713	25,097	65,210	166,086	163,813	112,523	88,952
Paper and allied products	80,392	137,086	258,795	760,852	791,030	451,292	317,650
Carbon black	9,198	12,613	26,646	65,844	9,976	5,704	2,691
Chemicals and allied products (except carbon black)	208,820	303,261	821,397	2,158,091	2,051,301	1,180,781	496,062
Petroleum refining	88,023	167,312	502,402	1,333,883	488,352	205,352	79,076
Rubber and miscellaneous plastic products	12,314	20,483	47,694	164,015	197,481	134,337	95,453
Glass products	73,844	92,362	183,233	524,302	429,443	290,355	144,339
Cement	52,129	81,001	130,210	135,038	35,363	20,929	11,614
Clay products, pottery, etc	60,873	63,707	111,670	250,795	254,079	173,573	109,189
Other stone products and miscellaneous	26,502	61,841	103,389	277,604	223,292	162,286	89,138
Primary iron and steel industries	232,470	313,595	568,959	1,533,627	1,123,360	659,932	273,711
Primary non-ferrous industries	88,218	89,949	268,145	768,053	562,798	339,375	197,780
Fabricated metal products, machinery equipment and supplies	93,760	162,290	319,800	729,513	957,537	761,588	473,310
Transportation equipment	53,093	92,514	194,678	286,168	404,121	279,699	178,956
Other manufacturing	23,883	45,777	129,238	377,918	613,265	546,350	262,359
Public Administration	c	c	74,956	227,343	450,563	410,924	355,300
Unclassified[d]	565,048	608,138	4,377,080	13,597,472	13,951,654	11,440,134	10,884,073
Total Gas Utility Industry Commercial, Industrial and "Other" revenues[a,e]	**$ 2,396,688**	**$ 3,547,273**	**$10,949,950**	**$38,143,276**	**$37,639,466**	**$27,169,553**	**$22,785,571**
Total Commercial, Industrial and "Other" revenues of co.'s reporting this table	**$2,123,185**	**$3,028,083**	**$ 9,473,153**	**$28,759,666**	**$26,851,517**	**$19,420,096**	**$13,639,932**
Transfers[a]	**$72,919**	**$92,443**	**$293,936**	**$1,173,364**	**$1,210,334**	**$728,024**	**$915,523**

a. Includes "revenues" detailed as transfers of gas for electric generation which are not included in Total Commercial, Industrial and "Other" revenues of companies reporting this table or in Total Gas Utility Industry revenues. Such "revenues" represent credits by the electric department to the gas department of combination gas and electric companies.

b. Classification eliminated.

c. New classification in 1972.

d. Difference between total and classified revenues.

e. Includes Industrial and "Other" sales only prior to 1971.

R–Revised.

Note: Prior to 1982 only large volume sales detailed by SIC.

TABLE 7-8
GAS UTILITY INDUSTRY REVENUES BY TYPE OF INDUSTRY CLASSIFICATION AND BY DIVISION, 1987

(Thousands)

Industry Classification	Total U.S.	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Agriculture, forestry and fisheries	$ 75,258	$ 1,166	$ 3,624	$ 18,499	$ 8,441	$ 4,649	$ 2,634	$ 5,194	$ 4,771	$ 26,280
Petroleum and natural gas production	108,474	6	322	243	71,025	13	1,623	19,506	1,771	13,965
Other mining	19,978	3	734	2,419	1,046	10,597	299	430	2,726	1,724
Electric services[a]	4,718,438	119,652	629,933	25,805	40,664	487,704	15,699	1,854,250	56,027	1,488,704
Other transportation, communication, and public utilities	235,304	23,646	43,137	51,335	18,868	10,279	14,338	719	20,547	52,435
Hotels, rooming houses, and camps	161,354	7,808	26,628	35,585	9,063	17,001	6,187	1,302	9,225	48,555
Laundries, cleaning and dyeing	130,185	5,747	12,830	33,620	2,464	7,550	8,506	1,090	4,540	53,838
Other services	1,228,223	62,507	147,642	493,695	74,725	71,101	68,125	14,102	55,182	241,144
Other non-manufacturing	1,382,687	126,020	221,028	467,533	62,358	176,092	46,122	4,139	49,562	229,833
Food and kindred products	441,980	8,446	64,673	82,810	74,259	58,007	27,311	14,258	6,669	105,547
Textile products, apparel, fabrics, etc.	224,037	10,410	14,932	7,864	718	151,001	15,332	453	295	23,032
Furniture, lumber, and other wood products	88,952	774	8,668	17,886	3,342	8,272	7,568	2,184	1,023	39,235
Paper and allied products	317,650	12,231	69,727	35,397	7,628	63,175	28,373	15,584	3,982	81,553
Carbon black	2,691	0	0	133	0	0	2,209	0	0	349
Chemicals and allied products (except carbon black)	496,062	12,337	69,215	97,426	42,960	95,088	37,226	99,292	4,444	38,074
Petroleum refining	79,076	4	7,094	6,877	10,469	600	394	12,979	771	39,888
Rubber and miscellaneous plastic products	95,453	6,253	11,126	31,902	1,532	23,111	7,057	345	519	13,608
Glass products	144,339	6,934	61,332	10,439	5,508	28,340	16,445	1,653	13	13,675
Cement	11,614	18	840	1,423	646	1,422	2,502	386	792	3,585
Clay products, pottery, etc.	109,189	1,699	6,728	6,442	4,702	65,474	9,473	986	1,264	12,421
Other stone products and miscellaneous	89,138	5,469	17,061	17,292	1,425	22,688	6,705	2,283	1,803	14,412
Primary iron and steel industries	273,711	4,772	67,088	121,564	2,253	30,803	30,057	43	1,321	15,810
Primary non-ferrous industries	197,780	6,998	14,290	50,369	12,891	18,718	23,521	1,578	11,620	57,795
Fabricated metal products, machinery equipment and supplies	473,310	34,226	59,889	188,767	28,299	40,898	29,777	9,988	3,455	78,011
Transportation equipment	178,956	10,431	17,317	59,113	23,177	18,606	7,112	45	1,313	41,842
Other manufacturing	262,359	15,014	49,086	79,325	16,253	40,090	18,868	2,390	5,129	36,204
Public administration	355,300	10,734	61,640	58,459	21,453	88,785	26,558	22,650	20,417	44,604
Unclassified	10,884,073	441,964	1,715,624	1,603,677	1,142,399	1,395,899	625,489	2,105,778	710,811	1,142,432
Total Gas Utility Industry Commercial, Industrial and "Other" revenues[a]	**$ 22,785,571**	**$ 935,269**	**$ 3,402,208**	**$ 3,605,899**	**$ 1,688,568**	**$ 2,935,963**	**$ 1,085,310**	**$ 4,193,607**	**$ 979,992**	**$ 3,958,555**
Total Commercial, Industrial and "Other" revenues of co.'s reporting this table	**$ 13,639,932**	**$ 609,983**	**$ 2,484,617**	**$ 2,623,202**	**$ 1,046,499**	**$ 2,101,680**	**$ 584,476**	**$ 1,369,316**	**$ 544,319**	**$ 2,275,840**
Transfers[a]	**$ 915,523**	**$ 9,101**	**$ 507,661**	**$ 3,043**	**$ 7,434**	**$ 21,547**	**$ 118**	**$ 349,284**	**$ 17,335**	**$ 0**

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a. Includes "revenues" detailed as transfers of gas for electric generation which are not included in Total Commercial, Industrial and "Other" revenues of companies reporting this table or in Total Gas Utility Industry revenues. Such "revenues" represent credits by the electric department of combination gas and electric companies.

REVENUES

TABLE 7-9
GAS UTILITY INDUSTRY REVENUES FROM GAS USED FOR ELECTRIC GENERATION, 1965-1987[a]

(Thousands)

	Revenue					
	Industrial[b]					
Year	Firm	Interruptible	Other	Total Revenue	Credits[c]	Total Revenue and Credits
1965	$293,999		$ 94,119	$ 388,118	$ 72,919	$ 461,037
1966	325,605		114,051	439,656	73,073	512,729
1967	346,912		96,643	443,555	75,298	518,853
1968	380,995		117,159	498,154	80,816	578,970
1969	426,325		112,454	538,779	71,747	610,526
1970	520,882		137,553	658,435	92,443	750,878
1971	$ 237,111	$ 335,539	160,035	732,685	201,213	933,898
1972	277,344	294,885	201,865	774,094	193,655	967,749
1973	185,106	309,653	214,419	709,178	197,418	906,596
1974	271,516	395,889	225,124	892,529	269,148	1,161,677
1975	352,660	473,951	361,969	1,188,580	293,936	1,482,516
1976	594,784	1,075,885	d	1,670,669	315,935	1,986,604
1977	779,919	1,535,133	d	2,315,052	379,274	2,694,326
1978	953,406	1,452,434	d	2,405,840	330,572	2,736,412
1979	1,424,871	2,063,626	d	3,488,497	721,948	4,210,445
1980	2,411,369	3,181,089	d	5,592,458	1,157,694	6,750,152
1981	3,042,009	4,285,518	d	7,327,527	1,213,333	8,540,860
1982	3,075,361	4,832,346	d	7,907,707	1,321,944	9,229,651
1983	2,486,220	4,253,117	d	6,739,337	1,351,422	8,090,759
1984	2,536,993	4,852,280	d	7,389,273	1,481,561	8,870,834
1985	2,857,907	4,569,758	d	7,427,665	1,210,334	8,637,999
1986	1,805,826	2,143,185	d	3,949,011	728,024	4,677,035
1987	1,280,436	2,509,688	d	3,790,124	915,523	4,705,647

a. Excludes revenues from direct sales by producers to straight electric utilities.

b. No breakdown available prior to 1971.

c. Represents "Revenues" from transfers of gas for electric generation. Such "Revenues" are credits by the electric department to the gas department of combination gas and electric companies.

d. Other now included with Industrial to conform to the definition of industrial services.

TABLE 7-10
GAS UTILITY INDUSTRY REVENUES, GAS USED FOR ELECTRIC GENERATION, BY STATE, 1987[a]

(Thousands)

Division and State	Industrial Revenue				Total Revenue and Credits
	Firm	Interruptible	Total	Credits[b]	
United States	**$1,280,436**	**$2,509,688**	**$3,790,124**	**$915,523**	**$4,705,647**
New England	**901**	**109,584**	**110,485**	**9,101**	**119,586**
Connecticut	0	46	46	9,101	9,147
Maine	0	0	0	0	0
Massachusetts	901	99,958	100,859	0	100,859
New Hampshire	0	0	0	0	0
Rhode Island	0	9,580	9,580	0	9,580
Vermont	0	0	0	0	0
Middle Atlantic	**3,809**	**117,062**	**120,871**	**507,661**	**628,532**
New Jersey	2,994	58,881	61,875	130,504	192,379
New York	331	57,369	57,700	377,157	434,857
Pennsylvania	484	812	1,296	0	1,296
East North Central	**7,340**	**11,814**	**19,154**	**3,043**	**22,197**
Illinois	3,188	4,888	8,076	122	8,198
Indiana	1,021	0	1,021	2,921	3,942
Michigan	1,429	1,800	3,229	0	3,229
Ohio	1,362	548	1,910	0	1,910
Wisconsin	340	4,578	4,918	0	4,918
West North Central	**15,783**	**16,628**	**32,411**	**7,434**	**39,845**
Iowa	899	2,625	3,524	2,971	6,495
Kansas	8,055	5,550	13,605	0	13,605
Minnesota	182	5,370	5,552	3,431	8,983
Missouri	5,003	1,175	6,178	982	7,160
Nebraska	1,644	1,678	3,322	0	3,322
North Dakota	0	62	62	0	62
South Dakota	0	168	168	50	218
South Atlantic	**2,939**	**462,254**	**465,193**	**21,547**	**486,740**
Delaware	2,435	0	2,435	14,671	17,106
District of Columbia	0	0	0	0	0
Florida	331	418,318	418,649	0	418,649
Georgia	0	4,950	4,950	0	4,950
Maryland	173	19,350	19,523	5,955	25,478
North Carolina	0	3,397	3,397	0	3,397
South Carolina	0	402	402	921	1,323
Virginia	0	0	0	0	0
West Virginia	0	15,837	15,837	0	15,837
East South Central	**12,823**	**2,738**	**15,561**	**118**	**15,679**
Alabama	85	511	596	0	596
Kentucky	0	0	0	118	118
Mississippi	12,738	2,122	14,860	0	14,860
Tennessee	0	105	105	0	105
West South Central	**1,164,536**	**340,430**	**1,504,966**	**349,284**	**1,854,250**
Arkansas	381	2	383	0	383
Louisiana	38,301	36,897	75,198	53,432	128,630
Oklahoma	4	3,515	3,519	169,614	173,133
Texas	1,125,850	300,016	1,425,866	126,238	1,552,104
Mountain	**34,633**	**4,059**	**38,692**	**17,335**	**56,027**
Arizona	19,971	408	20,379	0	20,379
Colorado	2,213	2,640	4,853	11,011	15,864
Idaho	0	0	0	0	0
Montana	0	78	78	420	498
Nevada	6,917	0	6,917	5,904	12,821
New Mexico	5,112	0	5,112	0	5,112
Utah	0	932	932	0	932
Wyoming	420	1	421	0	421
Pacific	**37,672**	**1,445,119**	**1,482,791**	**0**	**1,482,791**
Alaska	0	31,799	31,799	0	31,799
California	37,654	1,413,320	1,450,974	0	1,450,974
Hawaii	0	0	0	0	0
Oregon	0	0	0	0	0
Washington	18	0	18	0	18

a. Excludes revenues from direct sales by producers to electric utilities.

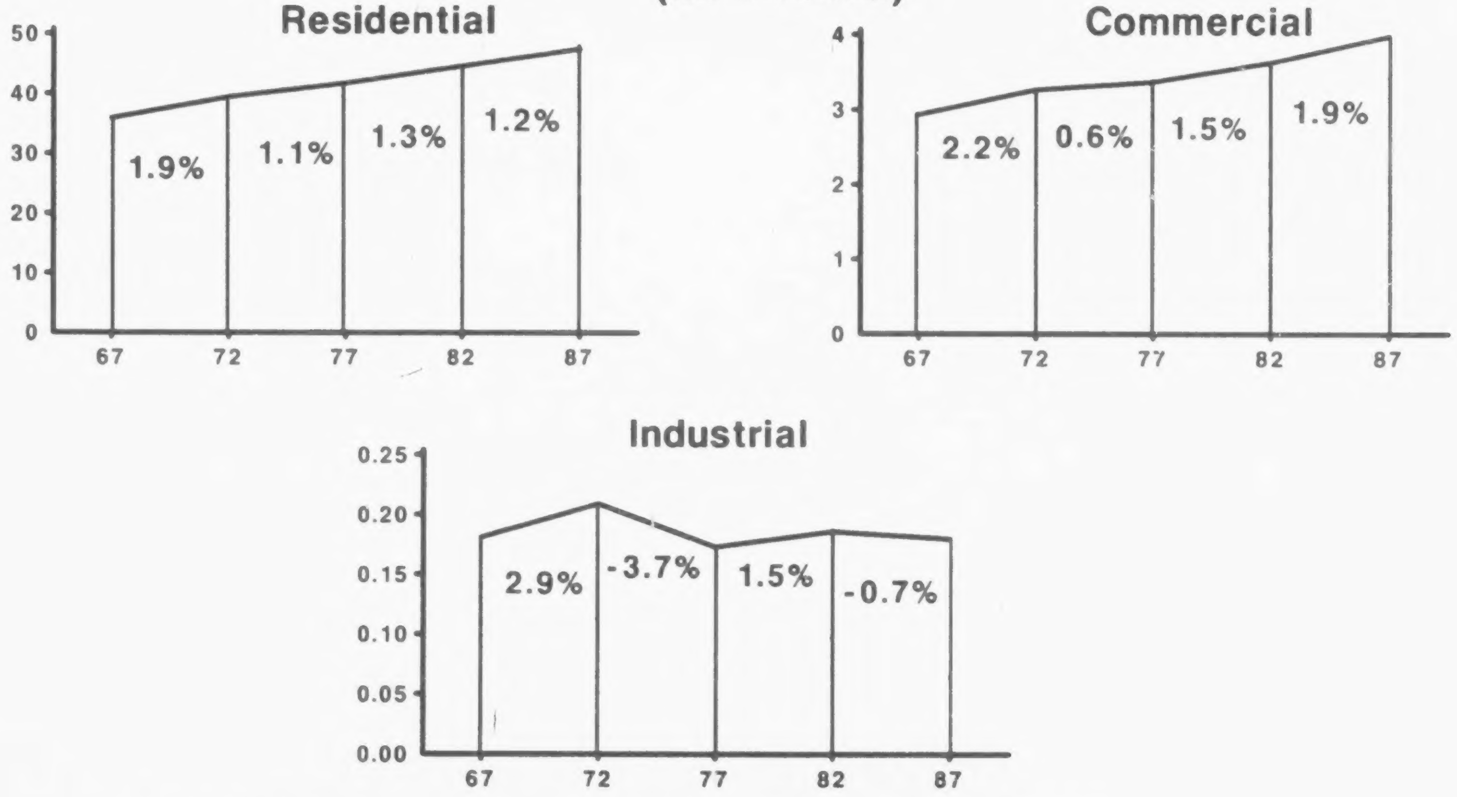
b. Represents "Revenues" from transfers of gas for electric generation. Such "Revenues" are credits by the electric department to the gas department of combination gas and electric companies.

SECTION 8
CUSTOMERS

	Average Customers	
	1987	% Change 87/86
Gas Utility Industry (Thousands)		
Total	51,575.6	+1.7
Residential	47,362.4	+1.7
Commercial	3,979.6	+2.3
Industrial	180.0	+1.4
Other	53.6	+3.1

CHART 8-1

GAS UTILITY INDUSTRY CUSTOMERS (MILLIONS)



% Equals Compound Annual Growth Rates

REFERENCE: TABLE 8-1

CUSTOMERS

TABLE 8-1
GAS UTILITY INDUSTRY CUSTOMERS, BY CLASS OF SERVICE, YEARLY AVERAGES, 1965-1987

(Thousands)

Year	Total	Residential	Commercial	Industrial[a]	Other[a]
1965	37,337.5	34,340.8	2,789.7	166.2	40.8
1966	38,228.4	35,141.8	2,868.2	173.9	44.5
1967	39,076.5	35,915.1	2,933.6	181.2	46.6
1968	39,930.0	36,691.1	3,003.6	188.1	47.2
1969	40,854.0	37,538.3	3,073.8	192.7	49.2
1970	41,482.1	38,097.0	3,130.9	199.1	55.1
1971	42,241.9	38,788.7	3,199.0	204.7	49.5
1972	42,954.8	39,428.0	3,263.6	209.2	54.1
1973	43,711.2	40,115.5	3,331.4	209.1	55.2
1974	44,267.2	40,626.7	3,392.0	193.8	54.7
1975	44,554.5	40,950.3	3,366.9	183.5	53.8
1976	44,941.4	41,337.6	3,371.5	179.7	52.6
1977	45,274.0	41,682.4	3,371.0	173.3	47.3
1978	45,788.9	42,183.2	3,369.8[b]	189.2[b]	46.7
1979	46,478.3	42,821.3	3,422.8	189.4	44.8
1980[R]	47,222.9	43,489.3	3,497.8	187.2	48.5
1981	47,947.5	44,149.4	3,564.5	187.2	46.5
1982	48,414.9	44,552.3	3,631.1	186.1	45.4
1983	48,799.2	44,893.8	3,676.3	182.2	46.8
1984	49,324.6	45,366.9	3,730.3	180.2	47.2
1985	49,970.7	45,928.7	3,815.7	179.0	47.3
1986[R]	50,704.3	46,583.2	3,891.5[c]	177.6	52.0[c]
1987	51,575.6	47,362.4	3,979.6	180.0	53.6

a. Prior to 1976, "Other" electric generation customers included in the "Other" class of service. For 1976 and beyond all electric generation customers included in the Industrial category.

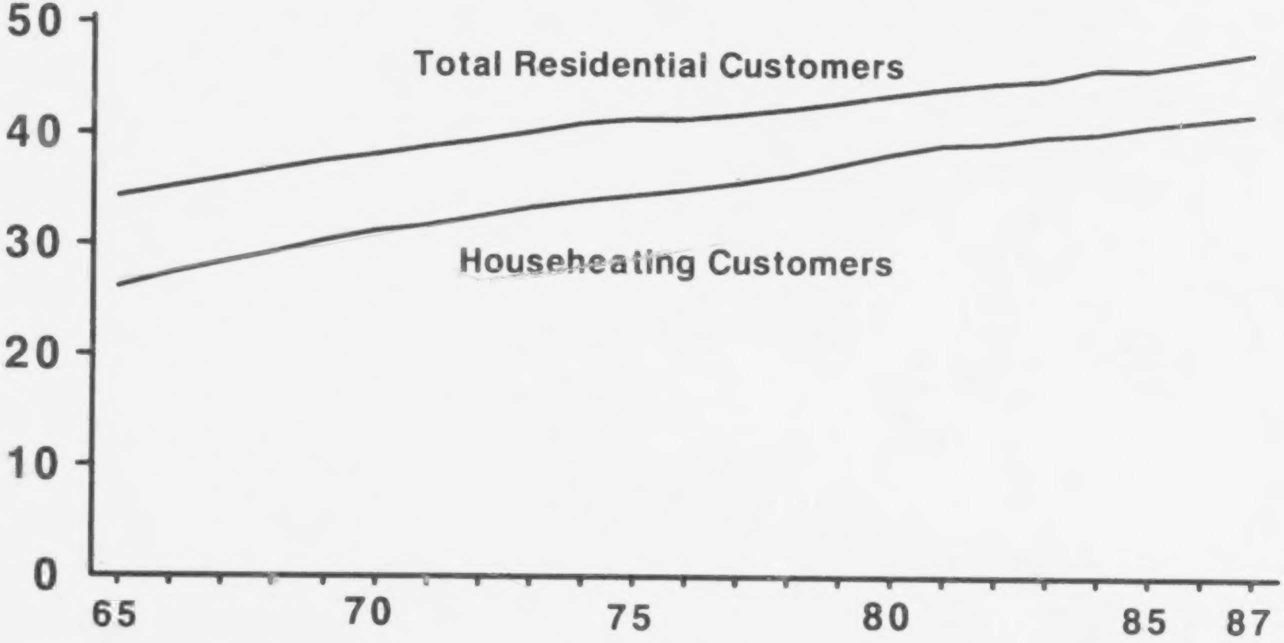
b. Reclassification of customers from commercial to industrial.

c. Reclassification of customers from commercial to other.

R–Revised.

CHART 8-2

GAS UTILITY HOUSEHEATING CUSTOMERS (MILLIONS)



REFERENCE: TABLE 8-6

CUSTOMERS

TABLE 8-2
GAS UTILITY INDUSTRY AVERAGE CUSTOMERS, BY QUARTER, 1965-1987

(Thousands)

Year and Quarter	Total	Residential	Commercial	Industrial[a]	Other[a]
1965					
First	37,174	34,156	2,814	163	41
Second	36,963	34,014	2,743	165	41
Third	36,932	34,021	2,704	167	40
Fourth	37,967	34,886	2,870	169	42
1970					
First	41,491	38,063	3,175	199	54
Second	41,419	38,058	3,109	199	53
Third	41,080	37,773	3,054	198	55
Fourth	41,939	38,494	3,186	201	58
1975					
First	44,762	41,099	3,406	194	63
Second	44,386	40,806	3,348	181	51
Third	44,233	40,686	3,322	177	48
Fourth	44,839	41,210	3,393	182	54
1980[R]					
First	47,365	43,579	3,549	188	49
Second	47,197	43,452	3,509	187	49
Third	46,879	43,218	3,427	186	48
Fourth	47,450	43,708	3,506	187	49
1981					
First	48,159	44,315	3,609	188	47
Second	47,942	44,140	3,567	188	47
Third	47,573	43,839	3,503	186	45
Fourth	48,116	44,303	3,580	186	47
1982					
First	48,723	44,803	3,687	188	45
Second	48,429	44,558	3,638	187	46
Third	47,990	44,197	3,564	184	45
Fourth	48,517	44,650	3,636	185	46
1983					
First	49,089	45,127	3,731	184	47
Second	48,813	44,900	3,683	183	47
Third	48,348	44,512	3,609	181	46
Fourth	48,946	45,035	3,683	181	47
1984					
First	49,587	45,585	3,773	181	48
Second	49,322	45,363	3,732	180	47
Third	48,896	45,004	3,666	179	47
Fourth	49,494	45,516	3,751	180	47
1985					
First	50,244	46,147	3,868	181	48
Second	49,917	45,876	3,814	180	47
Third	49,567	45,595	3,747	178	47
Fourth	50,158	46,099	3,834	178	47
1986[R]					
First	50,923	46,746	3,944	181	52
Second	50,625	46,508	3,887	178	52
Third	50,327	46,278	3,822	176	51
Fourth	50,943	46,801	3,913	177	52
1987					
First	51,723	47,461	4,026	182	54
Second	51,607	47,378	3,995	181	53
Third	51,171	47,032	3,908	178	53
Fourth	51,802	47,579	3,990	179	54

[a] Prior to 1976, "Other" electric generation customers included in the "Other" class of service. For 1976 and beyond all electric generation customers included in the Industrial category.

R – Revised.

TABLE 8-3
GAS UTILITY INDUSTRY AVERAGE CUSTOMERS, BY STATE, 1965-1987[a]

(Thousands)

Division and State	1965	1970	1975	1980^R	1985	1986^R	1987
United States	**37,337.5**	**41,482.1**	**44,554.5**	**47,222.9**	**49,970.7**	**50,704.3**	**51,575.6**
New England	**1,641.6**	**1,692.3**	**1,692.5**	**1,734.6**	**1,839.3**	**1,873.2**	**1,922.9**
Connecticut	378.8	393.7	392.5	405.0	433.0	441.0	452.2
Maine	28.5	23.4	18.1	15.0	15.2	15.4	15.5
Massachusetts	1,024.7	1,055.3	1,055.4	1,079.3	1,130.3	1,149.4	1,172.5
New Hampshire	40.2	44.1	45.4	50.9	57.9	58.8	67.8
Rhode Island	154.5	161.4	164.6	168.9	184.8	189.3	194.3
Vermont	14.9	14.4	16.6	15.4	18.0	19.3	20.7
Middle Atlantic	**7,919.6**	**8,192.1**	**8,230.3**	**8,111.4**	**8,362.7**	**8,458.2**	**8,558.1**
New Jersey	1,640.6	1,763.1	1,815.1	1,849.1	1,955.2	2,006.8	2,059.2
New York	4,076.4	4,125.6	4,102.5	3,925.5	4,023.5	4,051.3	4,080.6
Pennsylvania	2,202.5	2,303.4	2,312.7	2,336.8	2,384.0	2,400.1	2,418.3
East North Central	**8,400.3**	**9,508.7**	**10,253.1**	**10,775.6**	**11,118.9**	**11,261.6**	**11,441.8**
Illinois	2,634.6	2,938.4	3,134.2	3,304.2	3,355.8	3,386.0	3,429.3
Indiana	933.8	1,084.4	1,187.7	1,241.1	1,310.0	1,330.3	1,362.0
Michigan	1,732.9	2,018.5	2,234.5	2,443.3	2,550.9	2,591.8	2,638.2
Ohio	2,424.2	2,644.5	2,757.8	2,746.5	2,794.1	2,837.7	2,859.2
Wisconsin	674.8	822.9	939.0	1,040.5	1,108.1	1,129.8	1,153.1
West North Central	**3,074.7**	**3,499.9**	**3,820.4**	**4,126.5**	**4,373.4**	**4,424.8**	**4,513.0**
Iowa	541.9	642.1	691.6	745.4	764.2	766.0	767.9
Kansas	586.5	643.1	669.8	723.0	787.3	794.3	804.6
Minnesota	560.9	640.9	726.8	809.4	909.8	935.2	983.0
Missouri	933.4	1,068.2	1,167.1	1,218.4	1,241.0	1,253.7	1,275.8
Nebraska	330.2	367.7	400.5	442.4	466.3	469.2	473.2
North Dakota	47.4	55.2	71.3	85.7	94.6	95.1	95.6
South Dakota	74.4	82.6	93.1	102.4	110.1	111.3	112.9
South Atlantic	**2,995.6**	**3,528.9**	**3,861.9**	**4,042.2**	**4,404.6**	**4,515.7**	**4,626.9**
Delaware	73.3	81.4	82.8	81.5	85.2	87.1	89.2
District of Columbia	172.4	162.8	155.4	148.6	145.3	145.6	145.4
Florida	294.2	370.1	391.8	433.0	460.5	462.7	469.6
Georgia	670.9	804.4	912.3	1,025.9	1,195.6	1,247.4	1,297.3
Maryland	639.6	712.5	774.6	773.5	803.0	809.0	815.6
North Carolina	193.2	285.2	338.0	366.7	444.5	466.8	489.4
South Carolina	154.7	233.3	283.1	296.2	319.3	325.9	333.4
Virginia	432.7	497.3	528.4	523.2	563.8	585.4	604.0
West Virginia	364.6	381.9	395.4	393.6	387.3	386.8	382.9
East South Central	**1,699.6**	**1,947.2**	**2,139.2**	**2,211.6**	**2,285.7**	**2,314.9**	**2,352.1**
Alabama	522.1	588.8	637.1	679.0	688.4	697.8	700.1
Kentucky	506.0	583.0	631.3	626.7	643.7	647.9	654.7
Mississippi	310.6	347.3	380.3	396.7	403.7	405.1	405.8
Tennessee	360.9	428.1	490.5	509.3	549.4	564.1	591.5
West South Central	**4,329.9**	**4,758.5**	**5,092.0**	**5,509.8**	**5,847.6**	**5,869.4**	**5,853.1**
Arkansas	362.1	419.3	461.4	489.9	530.9	332.8	541.0
Louisiana	804.7	871.3	935.9	1,002.3	995.8	990.1	982.7
Oklahoma	648.7	697.6	740.5	816.4	902.8	898.4	886.7
Texas	2,514.4	2,770.3	2,954.2	3,201.2	3,418.1	3,448.1	3,442.8
Mountain	**1,587.3**	**1,892.9**	**2,311.6**	**2,700.3**	**3,041.1**	**3,080.5**	**3,140.6**
Arizona	374.1	447.5	554.1	579.1	595.4	593.8	600.0
Colorado	485.7	586.5	688.8	850.1	1,011.1	1,032.6	1,049.9
Idaho	52.2	79.0	107.5	108.6	116.9	119.3	122.1
Montana	137.6	150.8	173.4	182.7	189.1	188.8	190.0
Nevada	47.8	72.4	112.2	168.2	201.2	211.7	225.5
New Mexico	203.8	231.8	278.9	327.6	367.1	375.2	381.9
Utah	211.9	243.8	297.4	361.0	432.8	432.8	447.1
Wyoming	74.2	81.1	99.2	122.9	127.5	126.3	124.1
Pacific	**5,688.9**	**6,461.6**	**7,153.5**	**8,010.8**	**8,697.9**	**8,906.1**	**9,167.0**
Alaska	6.1	17.4	29.1	42.1	72.2	76.3	78.2
California	5,311.1	5,919.4	6,495.1	7,286.3	7,888.0	8,071.2	8,302.4
Hawaii	36.2	36.1	34.8	33.2	32.8	33.1	33.7
Oregon	146.2	197.5	248.2	275.3	303.6	311.6	320.7
Washington	189.3	291.2	346.3	373.9	401.3	413.9	432.0

[a] Excludes customers purchasing for resale.

R–Revised.

CUSTOMERS

TABLE 8-4
GAS UTILITY INDUSTRY CUSTOMERS, BY STATE AND CLASS OF SERVICE, AVERAGES, 1987

(Thousands)

		Class of Service				
Division and State	Total	Residential	Commercial	Industrial	Electric Generation	Other
United States	**51,575.6**	**47,362.4**	**3,979.6**	**179.5**	**0.5**	**53.6**
New England	**1,922.9**	**1,752.8**	**157.0**	**8.7**	**a**	**4.4**
Connecticut	452.2	410.0	39.4	2.7	a	0.1
Maine	15.5	12.0	3.4	0.1	0.0	0.0
Massachusetts	1,172.5	1,075.6	88.5	4.6	a	3.7
New Hampshire	67.8	59.0	8.5	0.1	0.0	0.2
Rhode Island	194.3	178.4	14.7	1.2	a	a
Vermont	20.7	17.8	2.4	a	0.0	0.5
Middle Atlantic	**8,558.1**	**7,897.4**	**623.6**	**26.0**	**a**	**11.2**
New Jersey	2,059.2	1,854.4	198.6	6.2	a	a
New York	4,080.6	3,795.1	262.2	14.0	a	9.4
Pennsylvania	2,418.3	2,247.9	162.8	5.8	a	1.8
East North Central	**11,441.8**	**10,526.1**	**863.2**	**48.5**	**0.1**	**4.0**
Illinois	3,429.3	3,142.9	267.0	18.7	a	0.8
Indiana	1,362.0	1,242.6	113.7	5.0	a	0.6
Michigan	2,638.2	2,448.8	178.9	10.5	a	a
Ohio	2,859.2	2,641.1	208.7	6.8	a	2.6
Wisconsin	1,153.1	1,050.6	95.0	7.5	a	a
West North Central	**4,513.0**	**4,066.9**	**431.4**	**12.7**	**0.2**	**1.9**
Iowa	767.9	685.3	80.4	2.0	a	0.3
Kansas	804.6	720.4	79.8	4.0	0.1	0.3
Minnesota	983.0	888.9	89.4	4.3	a	0.3
Missouri	1,275.8	1,177.5	97.0	0.6	a	0.7
Nebraska	473.2	410.9	60.8	1.2	a	0.2
North Dakota	95.6	83.5	12.0	0.1	a	a
South Dakota	112.9	100.4	12.0	0.5	a	a
South Atlantic	**4,626.9**	**4,218.3**	**382.5**	**17.6**	**a**	**8.6**
Delaware	89.2	82.9	6.2	0.2	a	a
District of Columbia	145.4	130.7	14.7	0.0	0.0	0.0
Florida	469.6	427.5	41.2	0.6	a	0.3
Georgia	1,297.3	1,198.8	90.7	4.6	a	3.2
Maryland	815.6	754.4	55.9	5.2	a	a
North Carolina	489.4	431.7	54.8	2.9	a	0.1
South Carolina	333.4	297.8	33.9	1.3	a	0.4
Virginia	604.0	543.2	54.0	2.4	0.0	4.4
West Virginia	382.9	351.3	31.2	0.3	a	0.1
East South Central	**2,352.1**	**2,113.3**	**220.7**	**6.2**	**a**	**11.8**
Alabama	700.1	644.4	50.5	2.0	a	3.2
Kentucky	654.7	592.5	59.7	1.3	0.0	1.3
Mississippi	405.8	364.8	38.0	1.1	a	1.9
Tennessee	591.5	511.6	72.6	1.9	a	5.5
West South Central	**5,853.1**	**5,339.5**	**486.8**	**18.5**	**0.1**	**8.4**
Arkansas	541.0	479.0	60.5	1.4	a	0.1
Louisiana	982.7	916.6	63.5	1.2	a	1.3
Oklahoma	886.7	798.6	84.9	2.5	a	0.7
Texas	3,442.8	3,145.2	277.9	13.4	a	6.3
Mountain	**3,140.6**	**2,842.1**	**290.5**	**4.7**	**a**	**3.3**
Arizona	600.0	553.0	46.0	0.3	a	0.6
Colorado	1,049.9	939.8	109.2	0.8	a	0.1
Idaho	122.1	104.4	17.4	0.3	0.0	0.0
Montana	190.0	168.2	21.3	0.4	a	0.1
Nevada	225.5	207.6	17.8	0.1	a	a
New Mexico	381.9	343.6	33.8	2.0	a	2.5
Utah	447.1	415.3	31.3	0.5	a	a
Wyoming	124.1	110.2	13.7	0.2	a	a
Pacific	**9,167.0**	**8,606.1**	**524.1**	**36.7**	**a**	**0.1**
Alaska	78.2	66.9	11.3	0.0	a	0.0
California	8,302.4	7,851.2	420.1	31.0	a	0.1
Hawaii	33.7	30.0	2.0	1.7	0.0	0.0
Oregon	320.7	279.3	40.7	0.7	0.0	0.0
Washington	432.0	378.7	50.0	3.3	a	a

a. Less than 0.05 thousand.

TABLE 8-5
GAS UTILITY INDUSTRY HOUSEHEATING CUSTOMERS, BY STATE, YEARLY AVERAGES FOR 1975–1987

(Thousands)

Division and State	1975	1980R	1985	1986	1987	
					Number	Saturation[a]
United States	**34,371.4**	**38,183.6**	**40,781.5**	**41,347.0**	**41,839.3**	**88.3**
New England	**857.1**	**1,009.5**	**1,138.3**	**1,193.7**	**1,218.0**	**69.5**
Connecticut	195.8	216.5	254.1	264.9	276.4	67.4
Maine	4.8	6.6	9.2	12.1	5.0	41.7
Massachusetts	531.5	636.0	698.1	730.4	741.1	68.9
New Hampshire	28.0	36.1	40.3	41.5	48.3	82.0
Rhode Island	86.3	103.1	123.1	130.1	131.5	73.7
Vermont	10.7	11.2	13.5	14.7	15.7	88.2
Middle Atlantic	**4,127.7**	**4,521.7**	**5,011.2**	**5,016.9**	**5,168.4**	**65.5**
New Jersey	793.4	947.5	1,156.7	1,244.2	1,283.3	69.2
New York	1,686.2	1,789.6	1,951.4	1,835.9	1,931.7	50.9
Pennsylvania	1,648.1	1,784.6	1,903.1	1,936.8	1,953.4	86.9
East North Central	**8,432.0**	**9,169.1**	**9,671.3**	**9,817.0**	**9,957.6**	**94.6**
Illinois	2,390.9	2,616.9	2,758.1	2,796.7	2,816.1	89.6
Indiana	947.6	1,050.1	1,158.4	1,155.0	1,205.3	97.0
Michigan	1,901.2	2,162.3	2,302.9	2,331.8	2,372.9	96.9
Ohio	2,482.0	2,508.9	2,534.1	2,567.8	2,593.6	98.3
Wisconsin	710.3	830.9	917.8	965.7	969.7	92.3
West North Central	**3,260.7**	**3,591.9**	**3,753.0**	**3,894.6**	**3,968.5**	**97.6**
Iowa	572.9	633.2	657.9	665.8	662.6	96.7
Kansas	595.4	649.9	649.5	702.2	713.9	99.1
Minnesota	598.3	691.3	783.7	808.9	849.8	95.6
Missouri	1,022.8	1,083.4	1,090.1	1,140.3	1,159.8	98.5
Nebraska	336.2	375.4	397.3	400.6	404.8	98.5
North Dakota	56.5	70.6	78.9	79.6	79.5	95.2
South Dakota	78.6	88.1	95.6	97.2	98.1	97.7
South Atlantic	**2,969.9**	**3,315.2**	**3,625.9**	**3,706.5**	**3,765.1**	**89.3**
Delaware	46.6	52.0	55.4	59.5	60.5	73.0
District of Columbia	86.1	92.1	98.3	100.4	101.1	76.8
Florida	261.7	368.6	370.8	339.2	342.0	80.0
Georgia	810.7	946.8	1,066.7	1,136.2	1,176.0	98.1
Maryland	528.8	550.5	594.9	608.7	612.0	81.1
North Carolina	274.4	288.4	380.0	393.5	398.9	92.4
South Carolina	226.9	257.3	260.1	269.0	265.7	89.2
Virginia	378.3	403.1	450.2	467.8	488.2	89.8
West Virginia	356.4	356.4	349.5	332.2	320.7	91.3
East South Central	**1,868.0**	**1,966.5**	**2,008.2**	**2,022.1**	**2,060.1**	**97.5**
Alabama	579.9	625.3	623.0	626.8	613.5	95.2
Kentucky	538.0	562.9	561.2	562.1	585.4	98.8
Mississippi	341.8	356.1	358.6	358.9	364.5	99.9
Tennessee	408.3	422.2	465.4	474.3	496.7	97.1
West South Central	**4,496.0**	**4,999.7**	**4,982.8**	**4,965.4**	**4,910.4**	**92.0**
Arkansas	405.8	433.9	379.1	380.3	391.0	81.6
Louisiana	859.3	931.7	894.8	880.5	857.1	93.5
Oklahoma	665.7	732.2	782.4	780.0	768.3	96.2
Texas	2,565.2	2,901.9	2,926.5	2,924.4	2,894.0	92.0
Mountain	**2,040.4**	**2,407.1**	**2,649.2**	**2,693.5**	**2,711.4**	**95.4**
Arizona	492.4	509.2	475.0	471.3	467.3	84.5
Colorado	610.9	759.1	903.8	933.4	939.8	100.0
Idaho	91.4	82.3	99.0	99.0	103.9	99.5
Montana	147.1	162.0	167.0	166.7	167.5	99.6
Nevada	100.7	155.3	162.3	170.3	181.2	87.3
New Mexico	239.4	291.7	330.0	337.3	326.4	95.0
Utah	272.6	338.3	398.8	403.3	415.3	100.0
Wyoming	85.9	109.2	113.3	112.2	110.0	99.8
Pacific	**6,319.6**	**7,202.9**	**7,941.6**	**8,037.3**	**8,079.8**	**93.9**
Alaska	24.0	36.2	61.9	65.2	66.9	100.0
California	5,794.5	6,620.2	7,288.5	7,401.1	7,403.6	94.3
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0
Oregon	206.7	225.0	245.2	249.6	255.6	91.5
Washington	294.4	321.5	346.0	321.4	353.7	93.4

a. Percentages refer to proportion of residential gas customers using gas for heating.

R – Revised.

Source: A.G.A. *Gas Househeating Survey*. Data represent average number of customers developed from number of year-end customers as shown in survey.

TABLE 8-6
GAS UTILITY INDUSTRY HOUSEHEATING CUSTOMERS AND HEATING SATURATIONS[a] BY CENSUS DIVISION, 1965–1987 YEARLY AVERAGES

(Thousands)

	1965		1970		1975		1980	
Census Division	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Percent
United States	**26,297**	**76.1**	**31,209**	**81.9**	**34,372**	**84.1**	**38,184**	**87.8**
New England	583	36.8	779	48.6	857	54.8	1,010	63.1
Middle Atlantic	3,212	43.2	3,827	50.3	4,128	54.1	4,522	60.0
East North Central	6,091	77.6	7,528	85.6	8,432	89.4	9,169	92.1
West North Central	2,485	88.6	2,916	92.2	3,261	94.5	3,592	96.3
South Atlantic	2,073	74.9	2,599	80.9	2,970	84.2	3,315	89.4
East South Central	1,422	92.4	1,695	96.4	1,868	96.5	1,967	98.5
West South Central	3,900	99.5	4,278	99.0	4,496	97.1	4,999	99.5
Mountain	1,366	96.4	1,646	97.3	2,040	98.0	2,407	98.2
Pacific	5,165	97.3	5,941	98.3	6,320	94.6	7,203	95.8

	1984		1985		1986		1987	
Census Division	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Percent
United States	**40,037**	**88.3**	**40,781**	**88.8**	**41,347**	**88.8**	**41,839**	**88.3**
New England	1,113	67.1	1,138	67.6	1,194	69.6	1,218	69.5
Middle Atlantic	4,910	63.9	5,011	64.8	5,017	64.2	5,168	65.5
East North Central	9,584	94.2	9,671	94.4	9,817	94.7	9,958	94.6
West North Central	3,720	95.3	3,753	95.3	3,895	97.7	3,969	97.6
South Atlantic	3,588	90.8	3,626	90.1	3,707	89.9	3,765	89.3
East South Central	2,002	97.8	2,008	97.6	2,022	97.1	2,060	97.5
West South Central	5,107	96.2	4,983	93.4	4,965	92.7	4,910	92.0
Mountain	2,661	99.3	2,649	96.2	2,694	96.2	2,711	95.4
Pacific	7,352	92.2	7,942	97.4	8,037	96.5	8,080	93.9

a. Percentages refer to proportion of total residential customers, within specified areas, using gas for heating.

Source: *A.G.A. Gas Househeating Survey.* Data represent average number of customers developed from number of year-end customers as shown in survey.

SECTION 9
PRICES

	1987	% Change 87/86*
Gas Utility Industry		
($/MMBtu)		
Total	$ 4.32	− 6.2
Residential	5.39	− 4.7
Commercial	4.77	− 5.4
Industrial	2.88	−13.9
Other	3.42	−14.9
Wellhead ($/Mcf)	1.71	− 8.1
City Gate	3.34	− 6.7
Electric	21.78	− 0.4
Number 2 Fuel Oil	6.13	+ 1.8

*Percentage change based on unrounded data for both years. Percentage change for wellhead price based on preliminary data for both years.

Prices in this section, unless cited as a source other than A.G.A., were developed using the following methodology. Total revenues for a specific segment and time period are divided by the corresponding total sales for that specific segment and time period. For example, the residential price (average 1987) for the state of New York was obtained by dividing total 1987 residential revenues in New York by the total 1987 residential sales in New York. Likewise, the residential price (average 1987) for the total United States was obtained by dividing total 1987 residential revenues in the United States by the total 1987 residential sales in the United States.

TABLE 9-1
AVERAGE WELLHEAD PRICES OF NATURAL GAS, BY STATE, 1965-1986[a]

(¢/MCF)

Division and State	1965	1970	1975	1980	1984	1985	1986
United States	**15.6¢**	**17.1¢**	**44.5¢**	**158.8¢**	**265.5¢**	**251.1¢**	**194.2¢**
New England	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Middle Atlantic	**26.9**	**28.0**	**68.0**	**210.2**	**334.8**	**319.4**	**261.2**
New Jersey	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York	30.8	30.3	74.0	194.9	400.0	337.0	339.3
Pennsylvania	26.7	27.9	67.5	212.7	325.0	315.6	250.0
East North Central	**23.1**	**26.4**	**66.6**	**217.6**	**343.3**	**329.2**	**314.7**
Illinois	11.7	15.7	70.0	190.0	278.0	277.0	257.1
Indiana	23.6	23.7	39.0	135.0	338.1	250.7	123.3
Michigan	25.1	26.7	63.4	235.5	375.9	360.0	360.0
Ohio	23.6	27.1	70.6	197.7	318.6	307.5	284.1
Wisconsin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
West North Central	**13.4**	**14.1**	**17.5**	**79.5**	**160.0**	**135.9**	**123.8**
Iowa	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kansas	13.3	14.0	17.2	77.2	148.8	127.0	121.4
Minnesota	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Missouri	24.5	24.5	34.0	0.0	375.0	350.0	375.0
Nebraska	14.6	17.1	54.1	82.9	224.0	301.1	282.1
North Dakota	16.0	16.4	23.0	118.8	226.4	189.6	135.2
South Dakota	0.0	0.0	0.0	b	367.0	251.4	246.3
South Atlantic	**23.4**	**25.5**	**50.4**	**274.2**	**335.8**	**368.8**	**361.0**
Delaware	0.0	0.0	0.0	0.0	0.0	0.0	0.0
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Florida	12.9	0.0	97.3	173.0	257.0	243.3	120.2
Georgia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maryland	25.2	24.9	27.0	45.6	58.3	59.0	65.0
North Carolina	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Carolina	0.0	0.0	0.0	0	0.0	0.0	0.0
Virginia	29.9	30.8	51.5	285.0	300.0	302.0	245.0
West Virginia	23.5	25.4	36.9	300.0	345.0	385.0	390.0
East South Central	**19.3**	**20.7**	**59.3**	**223.2**	**321.8**	**316.0**	**231.4**
Alabama	12.7	13.9	87.0	318.6	373.5	371.1	289.2
Kentucky	23.6	24.6	54.0	89.3[c]	170.0	238.6	188.3
Mississippi	17.3	18.4	49.6	231.7	346.8	316.5	213.1
Tennessee	19.0	19.9	43.0	176.0	350.0	248.0	178.0
West South Central	**14.6**	**16.7**	**45.6**	**156.9**	**260.3**	**248.0**	**187.9**
Arkansas	15.6	16.3	34.7	69.6	254.4	255.0	251.4
Louisiana	18.2	19.3	42.3	160.7[c]	273.2	266.4	221.2
Oklahoma	13.8	15.6	32.0	150.7	271.8	247.3	170.8
Texas	12.9	14.4	51.9	156.5[d]	244.5[d]	232.9	165.4
Mountain	**12.1**	**14.3**	**38.2**	**172.6**	**301.1**	**278.6**	**214.9**
Arizona	12.1	17.1	28.0	b	291.1	b	b
Colorado	12.9	14.7	48.0	147.0	343.4	289.9	205.0
Idaho	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Montana	8.2	10.3	43.3	145.4	246.0	239.0	205.0
Nevada	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Mexico	11.8	14.3	40.5	175.8	271.5	261.8	187.0
Utah	12.5	15.1	48.0	111.7	408.2	351.5	289.6
Wyoming	13.5	14.7	33.7	192.0	331.7	300.6	252.0
Pacific	**30.8**	**31.0**	**56.7**	**210.7**	**264.0**	**232.5**	**194.4**
Alaska	24.8	24.6	30.2	73.2	72.9	73.5	50.1
California	30.9	32.1	70.0	217.0	379.9	336.5	289.4
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oregon	0.0	0.0	0.0	240.0	278.1	240.2	200.0
Washington	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a. Reflects price at first point of transfer, representing sales made by producers. The 1987 U.S. average wellhead price of natural gas is estimated to be 171.0¢.

b. Not available.

c. Value data is for the period beginning June 1, 1980 and ending May 31, 1981.

d. Weighted average value obtained from separate onshore and OCS average value calculations.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1986.

PRICES

TABLE 9-2
GAS UTILITY INDUSTRY AVERAGE PRICES BY CLASS OF SERVICE, 1965-1987

($/MMBtu)

Year	Total	Residential	Commercial	Industrial	Other
1965	$0.62	$1.01	$0.78	$0.35	$0.36
1966	0.61	1.00	0.78	0.35	0.36
1967	0.61	1.00	0.78	0.35	0.36
1968	0.61	1.00	0.77	0.35	0.36
1969	0.62	1.01	0.78	0.36	0.39
1970	0.64	1.06	0.81	0.38	0.41
1971	0.68	1.12	0.85	0.41	0.38
1972	0.73	1.19	0.91	0.45	0.41
1973	0.79	1.25	0.95	0.50	0.44
1974	0.95	1.42	1.11	0.66	0.60
1975	1.29	1.69	1.38	0.99	0.94
1976	1.60	1.98	1.68	1.31	1.36
1977	1.97	2.33	2.07	1.69	1.74
1978	2.18	2.53	2.28	1.90	1.79
1979	2.52	2.92	2.66	2.23	1.94
1980	3.13	3.61	3.34	2.79	2.67
1981	3.65	4.16	3.91	3.29	3.46
1982	4.46	4.97	4.72	4.00	4.30
1983	5.12	5.88	5.51	4.41	4.92
1984	5.13	5.94	5.51	4.36	4.87
1985	5.02	5.95	5.44	4.10	4.79
1986^R	4.60	5.65	5.04	3.34	4.02
1987	4.32	5.39	4.77	2.88	3.42

R-Revised.

TABLE 9-3
GAS UTILITY INDUSTRY AVERAGE PRICES, BY STATE, 1965-1987[a]

($/MMBtu)

Division and State	1965	1970	1975	1980	1985	1986	1987
United States	**$0.62**	**$0.64**	**$1.29**	**$3.13**	**$5.02**	**$4.60**	**$4.32**
New England	**1.60**	**1.60**	**2.87**	**4.96**	**6.57**	**6.52**	**5.52**
Connecticut	1.51	1.60	2.93	4.99	7.28	6.96	6.22
Maine	2.96	2.23	3.04	5.15	7.44	7.06	6.45
Massachusetts	1.63	1.64	2.91	4.96	6.29	6.32	5.20
New Hampshire	1.71	1.54	2.21	4.25	6.70	6.33	6.03
Rhode Island	1.46	1.36	2.82	5.00	6.78	6.91	5.73
Vermont	2.93	2.22	2.06	5.66	5.71	5.14	5.01
Middle Atlantic	**1.04**	**1.06**	**1.97**	**3.98**	**6.31**	**6.09**	**5.59**
New Jersey	1.38	1.26	2.31	4.36	6.41	6.04	5.45
New York	1.20	1.21	2.14	4.43	6.57	6.51	5.96
Pennsylvania	0.81	0.87	1.68	3.45	5.94	5.63	5.25
East North Central	**0.73**	**0.74**	**1.34**	**3.17**	**5.27**	**4.92**	**4.73**
Illinois	0.74	0.73	1.35	3.26	5.05	4.54	4.37
Indiana	0.63	0.71	1.16	2.82	4.72	4.67	4.46
Michigan	0.80	0.78	1.43	3.06	5.66	5.19	5.01
Ohio	0.70	0.73	1.35	3.24	5.47	5.25	4.91
Wisconsin	0.82	0.80	1.31	3.42	5.36	5.18	5.19
West North Central	**0.53**	**0.56**	**1.00**	**2.68**	**4.61**	**4.21**	**3.91**
Iowa	0.62	0.62	1.04	2.81	4.61	4.20	3.80
Kansas	0.36	0.39	0.69	2.24	3.77	3.45	3.64
Minnesota	0.68	0.67	1.19	2.81	5.09	4.55	3.78
Missouri	0.56	0.54	1.18	3.04	4.98	4.56	4.25
Nebraska	0.51	0.51	0.90	2.34	4.33	4.01	3.79
North Dakota	0.68	0.82	1.26	3.57	5.28	4.93	4.89
South Dakota	0.65	0.71	1.05	2.81	5.07	4.57	4.18
South Atlantic	**0.72**	**0.72**	**1.39**	**3.28**	**5.29**	**4.75**	**4.62**
Delaware	0.96	0.93	1.73	3.46	5.53	5.18	4.67
District of Columbia	1.36	1.28	2.21	4.38	7.35	6.84	6.13
Florida	0.51	0.55	1.15	2.63	3.91	2.92	3.39
Georgia	0.61	0.57	1.12	3.17	5.31	5.15	5.08
Maryland	1.17	1.13	1.97	3.87	6.59	6.16	5.58
North Carolina	0.74	0.70	1.58	3.46	5.35	4.67	4.74
South Carolina	0.58	0.62	1.10	3.16	5.08	4.52	4.45
Virginia	0.98	0.95	1.78	3.58	5.93	5.36	4.93
West Virginia	0.59	0.64	1.24	3.27	5.65	5.55	4.66
East South Central	**0.50**	**0.51**	**1.03**	**2.85**	**4.55**	**4.38**	**4.25**
Alabama	0.51	0.52	1.04	3.11	4.81	4.63	4.70
Kentucky	0.64	0.67	1.11	2.90	4.90	4.56	4.24
Mississippi	0.39	0.38	0.95	2.71	3.93	4.01	4.29
Tennessee	0.50	0.53	1.00	2.69	4.51	4.24	3.84
West South Central	**0.32**	**0.35**	**0.99**	**2.53**	**3.89**	**3.36**	**2.95**
Arkansas	0.36	0.37	0.80	1.97	3.92	3.68	4.06
Louisiana	0.28	0.30	0.85	2.36	3.92	3.77	3.13
Oklahoma	0.40	0.46	0.79	2.05	3.73	3.94	3.58
Texas	0.31	0.35	1.10	2.72	3.91	3.23	2.78
Mountain	**0.46**	**0.49**	**0.99**	**2.84**	**4.66**	**4.47**	**4.34**
Arizona	0.52	0.57	1.19	2.82	4.81	4.74	4.74
Colorado	0.45	0.48	0.90	2.95	4.74	4.60	4.35
Idaho	0.57	0.67	1.48	4.03	5.19	5.10	4.36
Montana	0.47	0.54	1.03	3.03	4.64	4.17	3.93
Nevada	0.59	0.58	1.30	3.17	5.46	5.00	4.61
New Mexico	0.41	0.42	0.88	2.66	4.70	4.48	4.04
Utah	0.43	0.46	0.85	2.34	4.00	3.93	4.23
Wyoming	0.38	0.34	0.70	2.45	4.28	4.19	4.36
Pacific	**0.57**	**0.58**	**1.31**	**3.65**	**5.08**	**4.23**	**4.08**
Alaska	0.88	0.70	0.81	1.20	2.24	2.53	2.51
California	0.55	0.56	1.26	3.57	5.09	4.18	4.10
Hawaii	3.03	2.76	6.78	13.01	14.20	12.04	11.90
Oregon	0.71	0.74	1.80	4.64	5.61	5.06	4.63
Washington	0.60	0.65	1.55	4.33	5.38	4.71	3.81

a. Excludes sales for resale and revenues from sales for resale.

TABLE 9-4
GAS UTILITY INDUSTRY RESALE PRICES, BY STATE, 1970-1987[a]

($/MMBtu)

Division and State	1970	1975	1980	1984	1985	1986	1987
United States	**$0.35**	**$0.80**	**$2.41**	**$3.89**	**$3.82**	**$3.58**	**$3.34**
New England	**0.62**	**1.41**	**2.84**	**3.87**	**4.10**	**3.50**	**3.05**
Connecticut	0.63	1.51	2.91	3.87	4.11	3.56	3.14
Maine	b	b	b	b	b	b	b
Massachusetts	0.61	1.35	2.81	3.87	4.09	3.51	3.05
New Hampshire	0.62	0.99	2.59	3.99	4.38	3.53	2.90
Rhode Island	0.59	1.59	2.94	3.83	4.03	3.36	3.06
Vermont	b	0.67	b	b	b	b	b
Middle Atlantic	**0.43**	**0.93**	**2.49**	**3.88**	**3.95**	**3.65**	**3.25**
New Jersey	0.44	0.99	2.45	3.67	3.71	3.23	2.91
New York	0.46	0.93	2.59	4.00	4.02	3.97	3.42
Pennsylvania	0.41	0.90	2.45	3.91	4.04	3.69	3.39
East North Central	**0.37**	**0.79**	**2.41**	**3.92**	**3.91**	**3.99**	**4.24**
Illinois	0.31	0.68	2.12	3.47	3.51	3.55	3.98
Indiana	0.37	0.72	2.14	4.03	4.02	3.67	3.55
Michigan	0.40	0.87	2.93	4.17	4.46	6.21	7.83
Ohio	0.39	0.84	2.39	4.28	4.13	4.27	4.10
Wisconsin	0.41	0.95	3.07	4.25	4.11	3.98	4.56
West North Central	**0.34**	**0.70**	**2.11**	**3.87**	**3.64**	**3.26**	**3.03**
Iowa	0.39	0.78	2.48	3.95	3.82	3.66	3.58
Kansas	0.26	0.53	1.78	3.37	2.98	2.65	2.86
Minnesota	0.37	0.75	2.32	4.23	3.93	3.37	2.86
Missouri	0.32	0.69	1.86	3.73	3.43	3.03	2.93
Nebraska	0.34	0.69	2.02	4.00	4.00	3.58	3.16
North Dakota	0.42	1.40	4.55	4.41	4.16	3.86	3.81
South Dakota	0.37	0.72	2.11	4.32	4.07	3.62	3.27
South Atlantic	**0.39**	**0.80**	**2.44**	**4.18**	**4.35**	**3.94**	**3.95**
Delaware	0.62	0.98	2.41	4.32	4.59	4.17	4.34
District of Columbia	b	b	b	b	b	b	b
Florida	0.38	0.66	2.31	3.30	3.31	2.59	2.71
Georgia	0.37	0.69	2.30	4.07	4.24	4.11	4.62
Maryland	0.45	1.05	2.61	4.75	4.40	4.18	3.83
North Carolina	0.24	0.81	2.66	4.21	4.17	4.18	3.49
South Carolina	0.45	0.68	2.32	4.07	4.11	3.92	3.88
Virginia	0.42	0.98	2.60	4.46	4.65	3.97	3.82
West Virginia	0.36	0.76	2.35	4.26	5.97	4.92	7.32
East South Central	**0.32**	**0.64**	**2.15**	**3.60**	**3.87**	**3.50**	**3.29**
Alabama	0.33	0.64	2.25	3.88	3.99	3.87	4.35
Kentucky	0.37	0.71	2.23	3.86	3.86	3.73	3.43
Mississippi	0.27	0.62	2.19	3.68	3.86	3.91	4.45
Tennessee	0.29	0.61	2.04	3.33	3.80	3.16	2.69
West South Central	**0.21**	**0.63**	**2.15**	**3.67**	**3.46**	**3.21**	**2.84**
Arkansas	0.30	0.58	2.17	3.02	2.91	2.66	1.78
Louisiana	0.22	0.62	2.09	3.71	3.60	4.19	4.52
Oklahoma	0.20	0.62	2.05	3.41	3.10	2.66	1.76
Texas	0.20	0.64	2.21	3.71	3.45	2.90	2.51
Mountain	**0.32**	**0.71**	**2.37**	**3.86**	**3.54**	**3.27**	**3.14**
Arizona	0.33	0.70	2.26	3.83	3.47	3.10	3.11
Colorado	0.26	0.58	2.51	3.85	3.63	3.41	3.26
Idaho	0.34	1.14	3.43	3.93	3.68	3.08	2.77
Montana	0.46	0.95	3.42	4.39	4.12	3.91	3.64
Nevada	0.51	1.28	3.64	5.20	4.96	4.10	3.64
New Mexico	0.20	0.48	1.91	3.78	2.98	2.95	2.75
Utah	0.20	0.42	1.83	4.49	3.66	3.53	3.18
Wyoming	0.23	0.97	3.03	4.28	4.35	4.78	2.74
Pacific	**0.34**	**1.10**	**3.39**	**4.14**	**3.56**	**2.83**	**2.35**
Alaska	b	b	0.83	b	b	b	b
California	0.37	0.85	2.75	4.10	3.95	3.20	2.66
Hawaii	b	b	b	b	b	b	b
Oregon	0.30	1.27	4.29	4.32	3.39	2.60	2.14
Washington	0.32	1.11	3.40	3.90	3.60	3.09	2.83

a. Resale prices approximate city-gate prices.
b. No sales reported.

GAS FACTS

TABLE 9-5
AVERAGE GAS PRICES OF WELLHEAD, CITY GATE, AND END-USER LEVEL
1965-1987

Year	Wellhead ($/Mcf[b])	City Gate[a] ($/MMBtu[b])	Cost to the Ultimate Customer ($/MMBtu[b])
1965	$0.156	$0.339	$0.618
1966	0.157	0.333	0.612
1967	0.160	0.330	0.612
1968	0.164	0.328	0.607
1969	0.167	0.334	0.616
1970	0.171	0.354	0.641
1971	0.182	0.389	0.681
1972	0.186	0.429	0.730
1973	0.216	0.463	0.788
1974	0.304	0.573	0.953
1975	0.445	0.798	1.285
1976	0.580	0.984	1.599
1977	0.790	1.308	1.974
1978	0.905	1.466	2.184
1979	1.178	1.812	2.522
1980	1.588	2.414	3.134
1981	1.982	2.885	3.650
1982	2.457	3.598	4.456
1983	2.593	4.041	5.121
1984	2.655	3.890	5.128
1985	2.511	3.821	5.017
1986[R]	1.942	3.579	4.602
1987	1.710	3.339	4.315

a. Resale prices approximate city-gate prices. See Table 9-4.
b. Mcf and MMBtu prices are roughly comparable. On a MMBtu basis, the wellhead price would be slightly less.
R–Revised.
Source: For wellhead price, *Monthly Energy Review*.

TABLE 9-6
GAS UTILITY INDUSTRY AVERAGE PRICES, BY STATE AND CLASS OF SERVICE, 1987

($/MMBtu)

Division and State	Total	Class of Service Residential	Commercial	Industrial	Electric Generation	Other
United States	**$4.32**	**$5.39**	**$4.77**	**$3.11**	**$2.51**	**$3.42**
New England	**5.52**	**6.83**	**5.73**	**4.12**	**2.37**	**4.68**
Connecticut	6.22	7.94	5.66	4.20	b	7.25
Maine	6.45	7.74	6.72	5.27	a	a
Massachusetts	5.20	6.44	5.67	4.01	2.47	4.62
New Hampshire	6.03	6.63	5.99	4.10	a	6.20
Rhode Island	5.73	6.76	6.45	4.44	2.35	3.13
Vermont	5.01	6.39	4.95	3.52	a	6.96
Middle Atlantic	**5.59**	**6.36**	**5.41**	**3.92**	**2.74**	**4.77**
New Jersey	5.45	6.41	5.42	3.91	2.55	5.00
New York	5.96	6.69	5.59	4.29	3.00	4.68
Pennsylvania	5.25	5.88	5.22	3.65	2.22	5.02
East North Central	**4.73**	**5.04**	**4.54**	**3.81**	**3.59**	**3.95**
Illinois	4.37	4.63	4.17	3.71	3.65	4.60
Indiana	4.46	4.98	4.50	3.36	3.48	4.04
Michigan	5.01	5.20	4.85	4.09	3.94	3.17
Ohio	4.91	5.13	4.72	4.09	2.96	4.06
Wisconsin	5.19	5.95	4.77	4.07	3.59	2.90
West North Central	**3.91**	**4.51**	**3.89**	**2.96**	**2.59**	**3.09**
Iowa	3.80	4.65	3.80	2.76	2.60	4.10
Kansas	3.64	4.06	3.44	3.39	2.60	2.63
Minnesota	3.78	4.53	4.14	2.65	2.09	3.55
Missouri	4.25	4.66	3.97	3.40	3.10	3.41
Nebraska	3.79	4.31	3.79	2.82	2.77	3.12
North Dakota	4.89	5.47	4.56	3.47	b	b
South Dakota	4.18	4.73	4.15	3.03	2.47	1.91
South Atlantic	**4.62**	**6.27**	**5.06**	**3.57**	**2.70**	**3.49**
Delaware	4.67	6.15	5.03	3.62	2.30	3.71
District of Columbia	6.13	7.16	5.41	a	a	a
Florida	3.39	7.42	4.76	3.29	2.74	3.56
Georgia	5.08	6.30	5.24	3.49	2.18	4.90
Maryland	5.58	6.30	5.12	4.96	2.64	3.53
North Carolina	4.74	6.53	5.26	3.58	3.38	3.49
South Carolina	4.45	6.47	5.33	3.53	2.78	5.11
Virginia	4.93	5.90	4.76	3.54	a	4.66
West Virginia	4.66	5.61	4.80	3.06	2.11	2.42
East South Central	**4.25**	**5.25**	**4.53**	**3.03**	**3.13**	**4.21**
Alabama	4.70	6.44	4.91	3.00	2.59	3.83
Kentucky	4.24	4.49	4.27	3.51	a	3.68
Mississippi	4.29	5.86	5.26	2.82	3.15	4.83
Tennessee	3.84	4.61	4.23	3.04	b	4.35
West South Central	**2.95**	**4.93**	**4.22**	**2.03**	**2.31**	**2.51**
Arkansas	4.06	4.55	4.19	3.15	3.57	3.21
Louisiana	3.13	5.41	5.06	2.10	1.94	2.14
Oklahoma	3.58	4.53	4.13	1.93	2.99	2.79
Texas	2.78	4.98	4.10	1.96	2.33	2.77
Mountain	**4.34**	**4.83**	**4.23**	**3.31**	**3.02**	**3.36**
Arizona	4.74	5.87	4.44	3.63	2.90	3.55
Colorado	4.35	4.67	4.10	3.70	2.96	3.62
Idaho	4.36	5.45	4.33	3.21	a	a
Montana	3.93	4.08	4.05	3.36	b	3.60
Nevada	4.61	5.23	4.26	3.56	3.76	3.78
New Mexico	4.04	4.68	3.82	2.81	2.77	3.22
Utah	4.23	4.62	4.65	2.99	3.34	b
Wyoming	4.36	4.74	4.43	3.24	2.66	b
Pacific	**4.08**	**5.16**	**5.48**	**3.47**	**2.65**	**3.72**
Alaska	2.51	3.25	2.66	a	1.88	a
California	4.10	5.14	5.79	3.67	2.68	3.66
Hawaii	11.90	15.72	10.06	12.55	a	a
Oregon	4.63	6.46	5.79	3.23	a	a
Wasington	3.81	5.24	4.41	2.77	b	4.16

a. No sales reported.

b. Less than 0.05 trillion Btu in sales.

TABLE 9-7
AVERAGE RESIDENTIAL GAS PRICES, BY STATE, 1965-1987

($/MMBtu)

Division and State	1965	1970	1975	1980	1985	1986^{R}	1987
United States	**$1.01**	**$1.06**	**$1.69**	**$3.61**	**$5.95**	**$5.65**	**$5.39**
New England	**1.89**	**1.88**	**3.22**	**5.48**	**7.90**	**7.57**	**6.83**
Connecticut	1.83	1.93	3.27	5.73	8.89	8.61	7.94
Maine	3.33	2.89	4.25	6.35	8.80	8.26	7.74
Massachusetts	1.91	1.87	3.20	5.41	7.61	7.22	6.44
New Hampshire	1.85	1.77	2.46	4.55	7.26	6.86	6.63
Rhode Island	1.80	1.76	3.16	5.48	7.80	7.53	6.76
Vermont	3.44	1.78	2.80	6.43	6.53	6.51	6.39
Middle Atlantic	**1.31**	**1.34**	**2.26**	**4.45**	**7.17**	**6.90**	**6.36**
New Jersey	1.69	1.62	2.59	4.89	7.28	7.04	6.41
New York	1.35	1.38	2.43	4.86	7.62	7.36	6.69
Pennsylvania	1.10	1.17	1.90	3.76	6.52	6.22	5.88
East North Central	**0.95**	**0.99**	**1.56**	**3.37**	**5.74**	**5.34**	**5.04**
Illinois	1.02	1.02	1.58	3.46	5.37	4.88	4.63
Indiana	0.96	1.05	1.45	3.12	5.49	5.39	4.98
Michigan	0.97	1.00	1.60	3.15	6.03	5.46	5.20
Ohio	0.83	0.89	1.51	3.45	5.82	5.53	5.13
Wisconsin	1.14	1.21	1.71	3.80	6.39	6.13	5.95
West North Central	**0.85**	**0.92**	**1.37**	**3.08**	**5.24**	**4.85**	**4.51**
Iowa	0.92	0.96	1.41	3.20	5.32	5.02	4.65
Kansas	0.60	0.69	0.97	2.37	4.12	3.87	4.06
Minnesota	1.05	1.08	1.59	3.24	5.75	5.20	4.53
Missouri	0.84	0.93	1.45	3.37	5.47	5.05	4.66
Nebraska	0.83	0.86	1.26	2.71	4.97	4.53	4.31
North Dakota	0.86	1.05	1.50	3.83	5.59	5.28	5.47
South Dakota	0.95	1.04	1.40	3.11	5.62	5.14	4.73
South Atlantic	**1.23**	**1.23**	**2.02**	**4.15**	**6.71**	**6.51**	**6.27**
Delaware	1.59	1.50	2.34	4.15	6.80	6.85	6.15
District of Columbia	1.47	1.44	2.40	4.56	7.96	7.55	7.16
Florida	2.51	1.81	2.78	4.85	7.33	7.08	7.42
Georgia	1.03	0.98	1.75	4.06	6.44	6.46	6.30
Maryland	1.39	1.43	2.31	4.40	7.14	6.66	6.30
North Carolina	1.38	1.29	2.02	4.00	6.41	6.40	6.53
South Carolina	1.39	1.34	2.08	4.13	6.53	6.44	6.47
Virginia	1.45	1.42	2.29	4.24	7.07	6.47	5.90
West Virginia	0.80	0.87	1.47	3.62	5.97	5.97	5.61
East South Central	**0.91**	**0.92**	**1.43**	**3.37**	**5.47**	**5.31**	**5.25**
Alabama	1.11	1.10	1.72	4.10	6.24	6.28	6.44
Kentucky	0.80	0.84	1.30	3.08	5.27	4.83	4.49
Mississippi	0.87	0.88	1.41	3.39	5.34	5.48	5.86
Tennessee	0.90	0.89	1.33	2.94	4.96	4.83	4.61
West South Central	**0.77**	**0.85**	**1.35**	**3.00**	**5.23**	**5.03**	**4.93**
Arkansas	0.75	0.78	1.12	2.36	4.35	4.27	4.55
Louisiana	0.72	0.75	1.32	3.07	5.48	5.50	5.41
Oklahoma	0.75	0.80	1.15	2.38	4.45	4.79	4.53
Texas	0.80	0.92	1.47	3.30	5.59	5.12	4.98
Mountain	**0.74**	**0.83**	**1.34**	**3.23**	**5.29**	**5.04**	**4.83**
Arizona	1.04	1.14	1.83	3.74	6.66	6.19	5.87
Colorado	0.67	0.71	1.16	3.21	5.11	4.99	4.67
Idaho	1.22	1.34	2.25	4.94	6.56	6.00	5.45
Montana	0.63	0.84	1.18	2.88	4.51	4.21	4.08
Nevada	1.30	1.31	1.81	3.97	6.55	5.89	5.23
New Mexico	0.71	0.84	1.37	3.21	5.69	5.30	4.68
Utah	0.64	0.70	1.12	2.68	4.52	4.38	4.62
Wyoming	0.61	0.65	0.99	2.94	4.97	4.86	4.74
Pacific	**0.91**	**0.97**	**1.58**	**3.51**	**5.56**	**5.05**	**5.16**
Alaska	1.48	1.42	1.48	1.73	2.85	3.27	3.25
California	0.87	0.93	1.52	3.38	5.51	4.97	5.14
Hawaii	3.74	3.56	7.97	14.58	17.69	15.80	15.72
Oregon	1.52	1.44	2.41	5.36	6.73	6.49	6.46
Washington	1.32	1.29	2.12	4.91	6.44	5.91	5.24

R–Revised.

TABLE 9-8
AVERAGE ANNUAL RESIDENTIAL GAS BILLS, BY STATE, 1965-1987

($/Customer)

Division and State	1965	1970	1975	1980	1985R	1986	1987
United States	**$117**	**$137**	**$206**	**$401**	**$585**	**$531**	**$499**
New England	**128**	**162**	**274**	**493**	**702**	**694**	**637**
Connecticut	125	169	285	505	762	790	740
Maine	107	110	165	274	390	381	355
Massachusetts	132	163	276	494	684	662	600
New Hampshire	137	165	234	444	688	684	635
Rhode Island	117	146	266	474	696	691	641
Vermont	80	116	261	661	687	696	663
Middle Atlantic	**119**	**144**	**231**	**458**	**679**	**674**	**619**
New Jersey	124	150	229	439	640	638	598
New York	105	126	217	441	663	662	599
Pennsylvania	142	172	257	501	736	723	671
East North Central	**151**	**174**	**257**	**535**	**787**	**712**	**630**
Illinois	143	169	266	562	792	707	612
Indiana	128	168	220	449	673	639	558
Michigan	168	189	268	545	879	764	680
Ohio	157	172	259	547	766	721	656
Wisconsin	148	175	238	497	744	666	590
West North Central	**135**	**154**	**209**	**405**	**615**	**529**	**447**
Iowa	148	161	215	408	619	551	453
Kansas	93	114	145	301	457	383	390
Minnesota	176	190	255	450	743	633	468
Missouri	127	155	215	449	617	540	469
Nebraska	134	145	195	350	588	484	418
North Dakota	142	179	245	489	696	593	528
South Dakota	150	159	203	365	651	549	438
South Atlantic	**118**	**136**	**194**	**386**	**524**	**521**	**516**
Delaware	136	164	219	388	552	599	540
District of Columbia	129	147	230	472	719	743	693
Florida	68	87	107	194	238	233	251
Georgia	106	122	181	393	526	502	519
Maryland	133	158	225	425	607	609	561
North Carolina	124	144	188	388	491	499	554
South Carolina	105	122	151	319	360	391	440
Virginia	137	157	230	423	596	580	547
West Virginia	128	140	219	473	650	681	623
East South Central	**101**	**116**	**153**	**345**	**465**	**440**	**445**
Alabama	101	118	157	356	460	448	481
Kentucky	116	132	177	401	549	500	460
Mississippi	77	92	122	291	393	379	429
Tennessee	103	113	140	299	423	404	395
West South Central	**71**	**89**	130	**253**	**392**	**341**	**358**
Arkansas	85	103	128	226	379	340	387
Louisiana	59	72	108	236	362	343	361
Oklahoma	87	102	138	246	424	405	383
Texas	69	89	135	265	394	325	346
Mountain	**104**	**117**	**175**	**336**	**498**	**419**	**406**
Arizona	80	89	141	221	363	289	311
Colorado	103	111	171	385	509	434	429
Idaho	143	154	249	393	534	457	380
Montana	126	148	203	363	558	449	406
Nevada	134	148	204	347	480	371	355
New Mexico	96	109	173	318	480	418	399
Utah	128	148	201	373	610	535	500
Wyoming	106	117	160	378	610	515	461
Pacific	**94**	**103**	**174**	**286**	**420**	**329**	**346**
Alaska	341	282	328	375	586	598	584
California	92	97	166	272	405	313	337
Hawaii	102	120	232	364	360	310	308
Oregon	138	163	258	428	562	465	437
Washington	152	165	259	469	605	527	429

R-Revised.

TABLE 9-9
AVERAGE RESIDENTIAL CONSUMPTION AND COSTS
1965-1987[a]

Year	Gas: Consumption (MMBtu/Customer)	Gas: Annual Bill ($/Customer)	Gas: Price ($/MMBtu)	Electric Price ($/MMBtu)	Number 2 Fuel Oil Price ($/MMBtu)
1965	116.5	$117.34	$1.01	$ 6.59	$1.15
1966	118.8	119.38	1.00	6.45	1.18
1967	121.5	122.03	1.00	6.36	1.21
1968	124.1	124.48	1.00	6.21	1.25
1969	128.4	130.08	1.01	6.13	1.28
1970	129.2	136.69	1.06	6.15	1.33
1971	129.9	145.28	1.12	6.42	1.41
1972	130.4	154.56	1.19	6.71	1.42
1973	124.5	155.73	1.25	6.98	1.64
1974	119.6	169.82	1.42	8.29	2.60
1975	121.9	206.24	1.69	9.40	2.81
1976	121.3	240.48	1.98	10.11	3.01
1977	118.7	276.87	2.33	11.08	3.42
1978	121.0	307.40	2.53	11.81	3.66
1979	118.6	346.39	2.92	12.69	5.24
1980	111.0	400.84	3.61	14.45	7.21
1981	104.4	434.43	4.16	17.00	8.95
1982	107.1	531.96	4.97	18.90	8.70
1983	99.1	583.00	5.88	20.01	7.92
1984	102.0	605.80	5.94	20.93	8.08
1985	98.3	584.90	5.95	21.69	7.78
1986[R]	94.0	531.51	5.65	21.86	6.02
1987	92.6	498.75	5.39	21.78	6.13

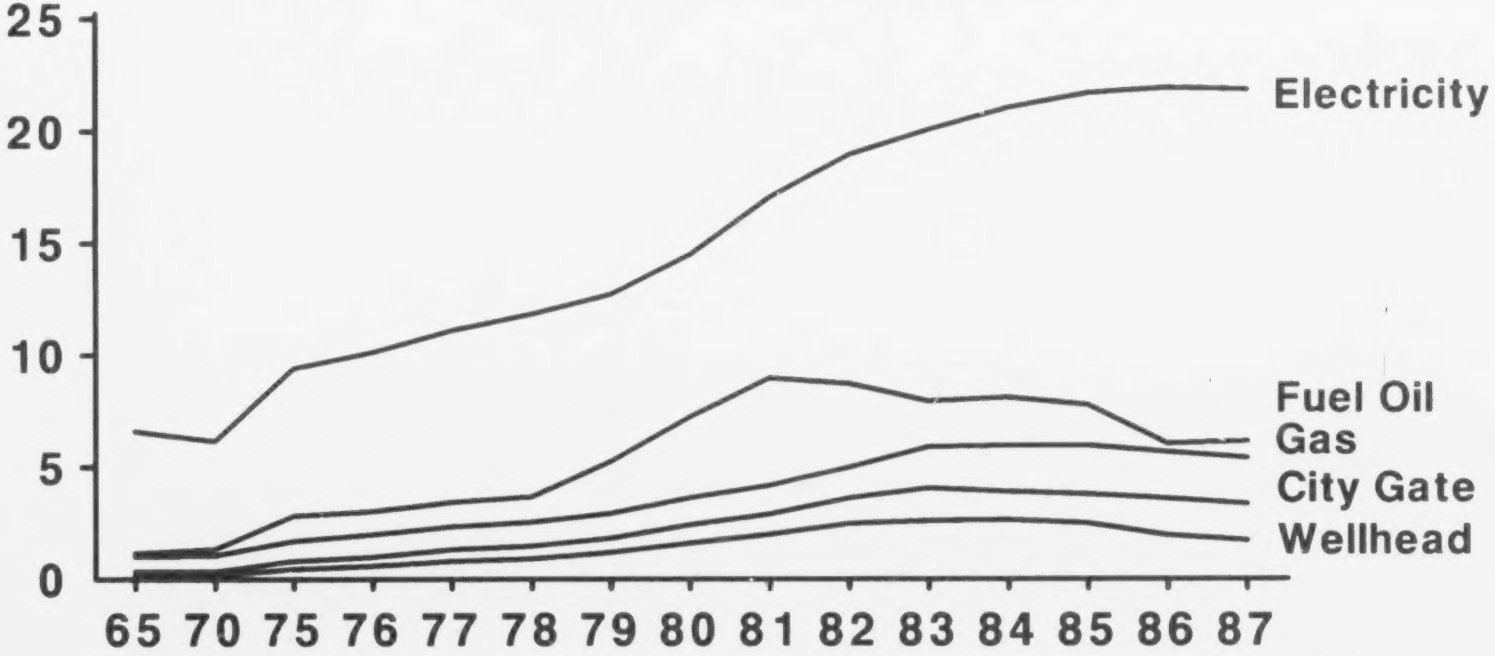
a. Prices given are for total usage.

R–Revised.

Sources: For electric price, Edison Electric Institute *Statistical Yearbook*. For oil price, Bureau of Labor Statistics.

CHART 9-1

RESIDENTIAL PRICES OF FUELS & ELECTRICITY (DOLLARS / MILLION BTU)



REFERENCE: TABLES 9-5, 9-9

TABLE 9-10
AVERAGE RESIDENTIAL GAS PRICES BY CENSUS DIVISION HEATING SEASON—NOVEMBER THRU MARCH

($/MMBtu)

	1981–82	1982–83	1983–84	1984–85	1985–86	1986–87	1987–88[a]
Total U.S.	$4.52	$5.56	$5.71	$5.81	$5.54	$5.16	$4.98
NE	7.04	8.39	7.47	7.70	7.41	6.69	6.50
MA	5.42	6.02	6.65	6.87	6.75	6.18	5.71
ENC	4.12	5.12	5.47	5.59	5.27	4.84	4.69
WNC	4.35	5.35	5.27	5.18	4.82	4.19	4.30
SA	5.17	6.12	6.46	6.46	6.35	6.21	5.58
ESC	4.28	5.38	5.22	5.34	5.08	4.89	4.89
WSC	3.97	4.87	5.00	4.99	4.83	4.48	4.53
M	4.48	5.13	5.21	5.20	5.01	4.61	4.52
P	3.91	4.98	5.46	5.68	5.54	4.97	5.11

a. Data used for 1988 was based on the *Quarterly Report of Gas Industry Operations.*

TABLE 9-11
AVERAGE GAS CONSUMPTION BY HOUSEHEATING CUSTOMERS BY CENSUS DIVISION HEATING SEASON—NOVEMBER THRU MARCH

(MMBtu/Customer)

	1981–82	1982–83	1983–84	1984–85	1985–86	1986–87	1987–88[a]
Total U.S.	81.8	70.7	78.2	75.3	72.9	70.1	73.8
NE	88.8	75.2	85.2	80.6	84.8	84.2	86.5
MA	111.3	89.8	101.7	95.4	97.2	97.4	93.7
ENC	116.1	92.2	108.7	101.3	103.4	94.3	100.7
WNC	93.4	77.8	89.1	87.4	86.5	71.9	82.3
SA	69.9	60.6	67.5	60.7	61.6	61.5	64.7
ESC	68.7	60.3	70.1	64.2	60.3	60.2	63.7
WSC	54.4	54.9	60.9	54.5	48.6	53.9	57.4
M	59.4	62.8	64.5	63.9	58.7	58.5	63.9
P	48.3	47.4	41.8	50.3	41.3	41.7	42.1

a. Data used for 1988 was based on the *Quarterly Report of Gas Industry Operations.*

TABLE 9-12
AVERAGE GAS BILL FOR HOUSEHEATING CUSTOMERS BY CENSUS DIVISION HEATING SEASON—NOVEMBER THRU MARCH

($/Customer)

	1981–82	1982–83	1983–84	1984–85	1985–86	1986–87	1987–88[a]
Total U.S.	$370	$393	$447	$437	$404	$362	$368
NE	625	631	636	621	628	563	563
MA	603	541	677	656	656	602	535
ENC	478	472	594	567	545	457	472
WNC	406	416	469	453	417	301	354
SA	361	371	436	392	391	382	361
ESC	294	325	366	342	306	294	312
WSC	216	267	304	272	235	241	260
M	266	322	336	332	294	269	289
P	189	236	228	286	208	208	215

a. Data used for 1988 was based on the *Quarterly Report of Gas Industry Operations.*

TABLE 9-13
GAS UTILITY INDUSTRY AVERAGE PRICES, FOR GAS USED FOR ELECTRIC GENERATION, BY STATE, 1981-1987

($/MMBtu)

Division and State	1981	1982	1983	1984	1985	1986^R	1987
United States	**$3.24**	**$4.09**	**$4.20**	**$4.22**	**$3.81**	**$2.72**	**$2.51**
New England	**3.64**	**4.20**	**3.93**	**4.01**	**3.54**	**2.36**	**2.37**
Connecticut	a	a	a	a	a	b	b
Maine	a	a	a	a	a	a	a
Massachusetts	3.74	4.21	3.95	4.02	3.54	2.32	2.47
New Hampshire	a	a	a	a	a	a	a
Rhode Island	3.35	4.09	3.69	3.86	3.57	3.34	2.35
Vermont	a	a	a	a	a	a	a
Middle Atlantic	**3.74**	**4.36**	**4.41**	**4.23**	**3.92**	**2.91**	**2.74**
New Jersey	3.88	4.59	4.38	4.35	4.05	2.88	2.55
New York	3.84	5.42	6.57	4.18	3.86	2.91	3.00
Pennsylvania	3.38	3.58	4.89	5.04	4.66	4.73	2.22
East North Central	**3.63**	**4.31**	**4.83**	**4.73**	**4.91**	**4.36**	**3.59**
Illinois	3.98	4.33	4.98	4.90	5.17	4.62	3.65
Indiana	3.05	3.54	4.28	4.17	4.14	3.82	3.48
Michigan	3.40	4.34	4.65	4.65	4.96	4.31	3.94
Ohio	3.32	4.23	5.05	5.59	4.86	4.47	2.96
Wisconsin	3.43	4.27	4.42	4.17	4.17	3.67	3.59
West North Central	**2.25**	**2.83**	**3.47**	**3.36**	**3.18**	**2.77**	**2.59**
Iowa	3.10	3.71	3.84	3.86	3.82	3.54	2.60
Kansas	2.12	2.64	3.33	3.16	2.89	2.45	2.60
Minnesota	2.62	3.41	3.86	3.94	3.90	3.31	2.09
Missouri	2.77	3.99	4.42	3.81	3.26	2.76	3.10
Nebraska	2.37	3.13	3.30	3.40	3.50	3.26	2.77
North Dakota	b	b	b	b	b	b	b
South Dakota	a	a	a	b	b	b	2.47
South Atlantic	**2.84**	**3.22**	**3.19**	**3.43**	**3.33**	**2.12**	**2.70**
Delaware	a	a	a	a	3.99	2.50	2.30
District of Columbia	a	a	a	a	a	a	a
Florida	2.81	3.20	3.16	3.42	3.32	2.10	2.74
Georgia	3.32	3.87	4.06	4.31	4.21	2.07	2.18
Maryland	4.27	4.22	a	a	b	2.54	2.64
North Carolina	4.55	4.02	4.69	4.76	b	2.65	3.38
South Carolina	4.20	4.22	4.44	a	4.50	3.47	2.78
Virginia	a	a	a	a	a	2.84	a
West Virginia	4.04	3.93	4.47	4.92	4.48	3.62	2.11
East South Central	**2.76**	**3.19**	**3.57**	**2.88**	**2.81**	**2.74**	**3.13**
Alabama	b	b	b	3.69	4.05	3.53	2.59
Kentucky	a	a	a	a	a	a	a
Mississippi	2.76	3.19	3.57	2.88	2.81	2.73	3.15
Tennessee	2.84	b	a	3.48	b	b	b
West South Central	**2.96**	**3.83**	**3.93**	**3.88**	**3.48**	**2.71**	**2.31**
Arkansas	2.14	3.18	3.52	3.69	3.61	2.80	3.57
Louisiana	3.03	3.53	3.78	3.66	3.57	2.89	1.94
Oklahoma	1.94	2.80	3.16	2.79	2.75	3.53	2.99
Texas	3.13	3.97	3.98	3.92	3.49	2.70	2.33
Mountain	**2.93**	**3.63**	**3.84**	**4.02**	**3.63**	**3.16**	**3.02**
Arizona	2.92	3.63	3.38	4.04	3.59	2.81	2.90
Colorado	3.28	3.80	4.28	3.89	3.62	3.08	2.96
Idaho	a	a	a	a	a	a	a
Montana	b	b	b	5.41	0.76	b	b
Nevada	3.08	4.16	4.84	4.54	4.21	3.86	3.76
New Mexico	2.65	3.28	3.53	3.68	3.41	3.42	2.77
Utah	a	a	a	a	3.83	2.39	3.34
Wyoming	a	a	a	a	4.60	2.88	2.66
Pacific	**3.91**	**4.95**	**4.98**	**4.99**	**4.40**	**2.88**	**2.65**
Alaska	1.19	.95	1.43	1.57	1.69	1.97	1.88
California	3.96	5.07	5.11	5.09	4.48	2.91	2.68
Hawaii	a	a	a	a	a	a	a
Oregon	5.54	b	b	b	a	a	a
Washington	4.77	7.54	b	a	b	a	b

a. No sales reported.
b. Less than 0.05 trillion Btu in sales.
R - Revised.

TABLE 9-14
AVERAGE CONSUMER PRICE INDEXES, 1965-1987[a]

(1967 = 100)

Year	All Items	Total Food	Apparel[b] and Upkeep	Shelter[c]	Gas and Electricity	Fuel Oil[d] and Coal	House Furnishing[e] and Operation	Trans-portation	Medical Care	Personal Care	Reading and Recreation	Other Goods and Services[f]
1965	94.5	94.4	93.7	93.8	99.4	94.6	97.1	95.9	89.5	95.2	95.9	94.2
1966	97.2	99.1	96.1	96.8	99.6	97.0	98.0	97.2	97.1	97.5	97.5	97.2
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.2	103.6	105.4	104.8	100.9	103.1	103.9	103.2	106.1	104.2	104.7	104.6
1969	109.8	108.9	111.5	113.3	102.8	105.6	109.0	107.2	113.4	109.3	108.7	110.3
1970	116.3	114.9	116.1	123.6	107.3	110.1	113.4	112.7	120.6	113.2	113.4	116.2
1971	121.3	118.4	119.8	128.8	114.7	117.5	118.1	118.6	128.4	116.8	119.3	122.2
1972	125.3	123.5	122.3	134.5	120.5	118.5	121.0	119.9	132.5	119.8	122.8	126.1
1973	133.1	141.4	126.8	140.7	126.4	136.0	124.9	123.8	137.7	125.2	125.9	129.0
1974	147.7	161.7	136.2	154.4	145.8	214.6	140.5	137.7	150.5	138.3	133.8	137.2
1975	161.2	175.4	142.3	169.7	169.6	235.3	158.1	150.6	168.6	150.7	144.4	147.4
1976	170.5	180.8	147.6	179.0	189.0	250.8	168.5	165.5	184.7	160.5	151.2	153.3
1977	181.5	192.2	154.2	191.1	213.4	283.4	177.0	177.2	202.4	170.9	157.9	159.2
1978	195.3	211.2	159.5	210.3	232.6	298.3	177.0	185.8	219.4	182.0	g	183.2
1979	217.7	234.7	166.4	240.3	257.6	403.6	188.9	212.8	240.1	195.5	g	196.3
1980	247.0	255.3	177.4	283.1	301.2	557.2	202.9	250.5	267.2	212.7	g	213.6
1981	272.4	274.6	186.9	314.7	345.9	675.9	221.3	280.0	294.5	232.0	g	235.7
1982	289.1	285.7	191.8	337.0	393.8	667.9	233.2	291.5	328.7	248.3	g	257.0
1983	298.4	291.7	196.5	344.8	428.7	628.0	238.5	298.4	357.3	261.1	g	288.3
1984	311.1	302.9	200.2	361.7	445.2	641.8	242.5	311.7	379.5	271.4	g	307.7
1985	327.9	309.5	204.5	401.6	466.0	486.6	250.2	308.6	432.0	291.0	g	342.6
1986	328.4	319.7	210.9	409.3	445.6	504.5	246.5	307.6	431.0	289.0	g	341.7
1987	340.2	355.9	219.9	417.1	424.7	520.3	250.9	324.4	471.3	300.6	g	371.2

a. Applicable to "wage-earners and clerical workers in urban United States."
b. Includes apparel only prior to June 1964.
c. Includes hotel and motel rates.
d. Starting in 1978 includes bottled gas.
e. Includes house furnishings only prior to 1969.
f. Prior to 1978 included alcoholic beverages, now found in food and beverages; now includes personal care and education—related expenses, formerly found in health and recreation.
g. Not available.

Source: Bureau of Labor Statistics. *The Consumer Price Index*, 1987.

TABLE 9-15
INDEXES OF WHOLESALE PRICES OF GAS, YEARLY AVERAGES, 1965-1987 AND MONTHLY AVERAGES, 1987

(1967 = 100)

Year and Month		All Gas	Utility Gas	Liquefied Petroleum Gas
1965		92.8	97.8	69.2
1966		96.7	98.6	89.1
1967		100.0	100.0	100.0
1968		91.3	101.9	60.2
1969		93.1	103.0	63.7
1970		103.0	105.6	96.3
1971		108.0	112.2	95.7
1972		114.1	121.0	93.7
1973		126.7	131.3	113.2
1974		162.2	154.6	183.5
1975		216.7	215.3	221.0
1976		286.8	291.8	287.7
1977		387.8	412.3	367.9
1978		428.6	488.2	343.5
1979		544.4	637.6	406.9
1980		760.4	846.6	642.2
1981		939.8	1,099.1	703.6
1982		1,060.8	1,338.1	628.0
1983		1,147.9	1,426.9	714.5
1984		1,109.0	1,419.6	622.4
1985		1,047.0	1,376.4	541.9
1986		882.1	1,199.2	382.5
1987		784.0	1,061.1	360.6
	January	774.1	1,066.8	309.0
	February	774.8	1,055.7	339.9
	March	791.3	1,086.0	359.6
	April	800.6	1,093.0	346.4
	May	788.8	1,063.5	369.5
	June	784.9	1,062.8	358.2
	July	786.5	1,062.6	363.7
	August	793.2	1,068.1	374.1
	September	801.3	1,074.4	387.7
	October	778.2	1,045.6	372.1
	November	758.1	1,011.8	376.8
	December	775.7	1,042.6	370.0

Source: Bureau of Labor Statistics, *Producer Prices and Price Index*, 1987. Represents unofficial estimates of U.S. Bureau of Labor Statistics, based on wellhead prices for natural gas by 20 major pipeline companies, and L.P.G. price quotations from 2 major producers.

SECTION 10
ENERGY CONSUMPTION

	1987	% Change 87/86
Average Annual Consumption		
(Millions of Btu per Customer)		
Total	204.4	− 6.8
Residential	92.6	− 1.5
Commercial	541.7	− 5.8
Industrial	21,375.4	−12.5
Other	2,885.9	−10.2

TABLE 10-1
ANNUAL CONSUMPTION OF ENERGY RESOURCES IN THE UNITED STATES, BY MAJOR SOURCES, BY CONSUMING SECTORS, 1980–1987[a]

(Trillions of Btu)

Consuming Sectors	Coal and Coke	Natural gas dry[b]	Petroleum[c]	Hydropower[d]	Nuclear power[d]	Other[e]	Total gross energy inputs[f]	Utility electricity purchased[g]	Total Sector energy inputs
Household and commercial:									
1980	145	7,540	3,035	—	—	—	10,720	4,355	15,075
1981	167	7,243	2,634	—	—	—	10,044	4,497	14,541
1982	187	7,427	2,449	—	—	—	10,063	4,566	14,629
1983	192	7,024	2,498	—	—	—	9,715	4,680	14,395
1984[R]	209	7,292	2,585	—	—	—	10,086	4,922	15,008
1985[R]	176	7,079	2,573	—	—	—	9,827	5,072	14,899
1986[R]	176	6,825	2,576	—	—	—	9,576	5,251	14,827
1987[P]	164	6,853	2,606	—	—	—	9,622	5,475	15,097
Industrial:									
1980	3,120[h]	8,394	9,524	33	—	—	21,071	2,781	23,852
1981	3,141[h]	8,257	8,295	33	—	—	19,726	2,817	22,544
1982	2,530[h]	7,116	7,797	33	—	—	17,476	2,542	20,018
1983	2,474[h]	6,821	7,420	33	—	—	16,748	2,648	19,396
1984	2,831[h]	7,449	7,885	32	—	—	18,197	2,862	21,059
1985[R]	2,747[h]	7,080	7,702	33	—	—	17,562	2,850	20,412
1986[R]	2,626[h]	6,693	7,934	33	—	—	17,285	2,758	20,043
1987[P]	2,680	6,873	8,157	33	—	—	17,742	2,891	20,633
Transportation:[i]									
1980	—	650	19,009	—	—	—	19,659	11	19,669
1981	—	658	18,800	—	—	—	19,458	11	19,470
1982	—	612	18,418	—	—	—	19,030	11	19,040
1983	—	505	18,592	—	—	—	19,097	11	19,108
1984	—	545	19,295	—	—	—	19,839	13	19,852
1985[R]	—	519	19,558	—	—	—	20,077	14	20,091
1986[R]	—	499	20,235	—	—	—	20,734	12	20,746
1987[P]	—	513	20,606	—	—	—	21,120	13	21,133
Electricity generation, utilities									
1980	12,123	3,810	2,634	3,085	2,739	114	24,505	(7,147)	—
1981	12,583	3,768	2,202	3,072	3,008	127	24,760	(7,325)	—
1982	12,582	3,342	1,568	3,528	3,131	108	24,260	(7,119)	—
1983	13,213	2,998	1,544	3,838	3,203	133	24,929	(7,339)	—
1984[R]	14,020	3,220	1,286	3,684	3,553	174	25,937	(7,797)	—
1985[R]	14,542	3,160	1,090	3,330	4,147	213	26,482	(7,936)	—
1986[R]	14,444	2,691	1,452	3,372	4,475	232	26,665	(8,021)	—
1987[P]	15,188	2,941	1,257	3,009	4,920	245	27,559	(8,379)	—
Unaccounted for:									
1980	—	—	—	—	—	—	—	—	—
1981	—	—	—	—	—	—	—	—	—
1982	—	8	—	—	—	—	8	—	—
1983	(1)	9	—	—	—	—	8	—	—
1984	—	—	—	—	—	—	—	—	—
1985[R]	—	—	—	—	—	—	—	—	—
1986[R]	—	—	—	—	—	—	—	—	—
1987[P]	—	—	—	—	—	—	—	—	—
Total gross energy inputs:									
1980	15,588	20,394	34,202	3,118	2,739	114	75,955	—	58,596
1981	15,892	19,928	31,931	3,105	3,008	127	73,990	—	56,555
1982	15,300	18,505	30,231	3,561	3,131	108	70,837	—	53,687
1983	15,878	17,357	30,054	3,871	3,203	133	70,497	—	52,899
1984[R]	17,059	18,507	31,051	3,717	3,553	174	74,060	—	55,918
1985[R]	17,465	17,834	30,922	3,363	4,147	213	73,944	—	55,400
1986[R]	17,245	16,708	32,196	3,405	4,475	232	74,260	—	55,616
1987[P]	18,029	17,180	32,627	3,041	4,920	245	76,042	—	56,863

[a] Gross energy is the total of inputs into the economy of the primary fuels (including imports) or their derivatives, plus the generation of hydro, nuclear power and other (converted to equivalent energy inputs).

[b] Excludes natural gas liquids.

[c] Petroleum products including still gas, liquefied refinery gas and natural gas liquids.

[d] Outputs and hydropower (adjusted for net imports or net exports) are converted to theoretical energy inputs using 10,320 Btu per net KWH for 1987. Energy input for nuclear power converted at an average heat rate of 10,807 Btu per net KWH. Excludes inputs for power generation by non-utility plants, which are included within the other consuming sectors.

[e] Includes geothermal power and electricity produced from wood and waste.

[f] Gross energy resource inputs with electricity generation shown as separate consuming sector.

[g] Utility electricity generated and imported, distributed to the other consuming sectors as energy resource inputs.

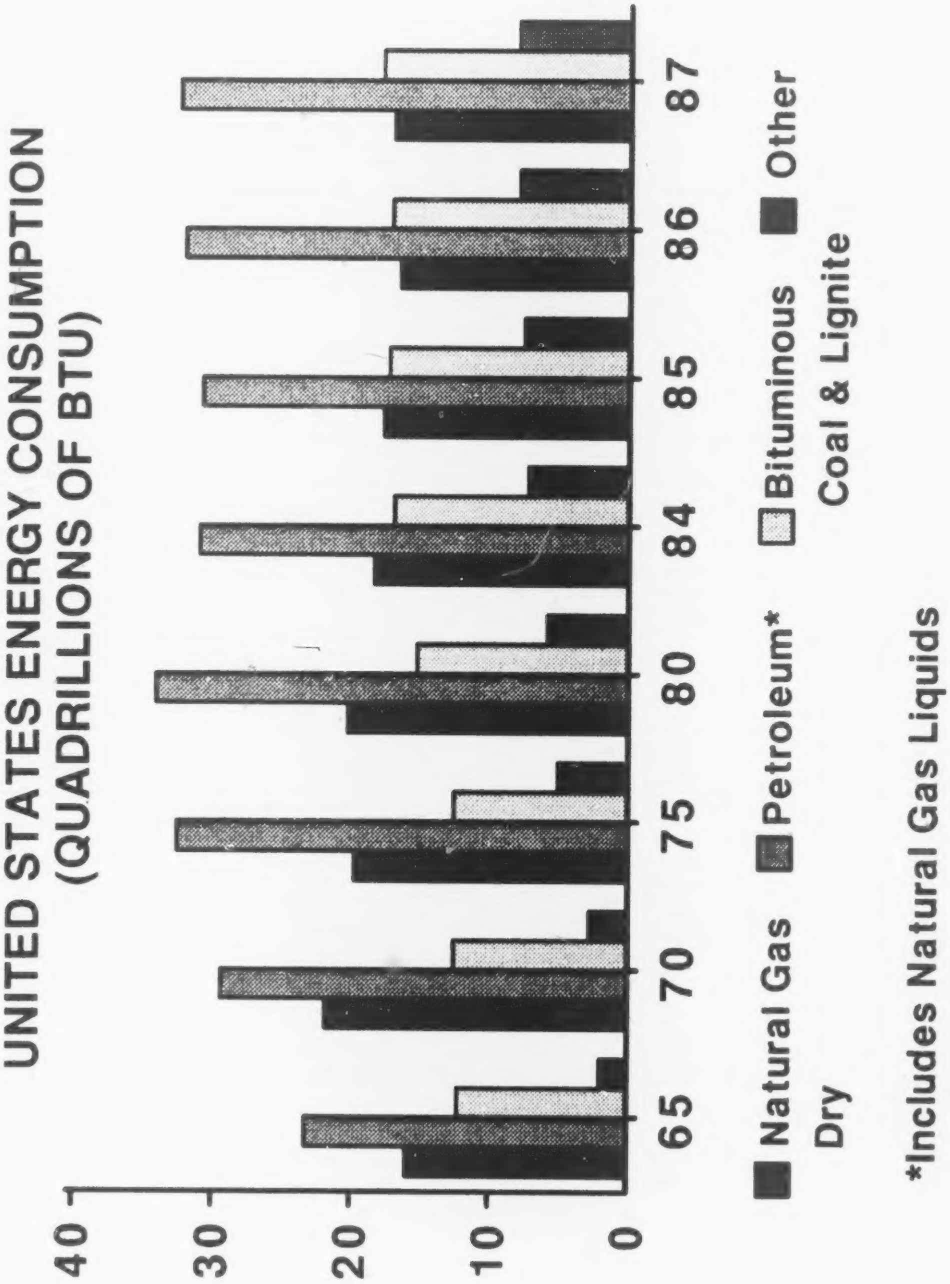
[h] Includes net imports of coke of −35 trillion Btu in 1980, −16 trillion Btu in 1981, −22 trillion Btu in 1982, −16 trillion Btu in 1983, −11 trillion Btu in 1984, −13 trillion Btu in 1985, −17 trillion Btu in 1986, and 9 trillion Btu in 1987.

[i] Includes bunkers and military transportation.

R–Revised. P–Preliminary.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*.

CHART 10-1



REFERENCE: TABLE 10-1

TABLE 10-2
ANNUAL CONSUMPTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLEAR POWER, IN THE UNITED STATES, 1965–1987[a]

(Trillions of Btu)

Year	Natural Gas Dry[b,c]	Natural Gas Liquids	Crude Petroleum and Products	Bituminous Coal and Lignite[d]	Anthracite Coal	Hydro-power[e]	Nuclear[e]	Other[f]	Grand Total Energy
1965	16,097	1,853	21,566	12,030	328	2,057	38	g	53,969
1966	17,393	1,989	22,405	12,740	290	2,073	58	g	56,948
1967	18,250	2,043	23,292	11,982	274	2,344	80	g	58,265
1968	19,580	2,239	24,813	12,401	258	2,342	130	g	61,763
1969	21,020	2,459	25,962	12,509	224	2,659	146	g	64,979
1970	22,029	2,494	27,043	12,488	210	2,650	229	g	67,143
1971	22,470	2,496	28,074	11,858	187	2,862	404	g	68,351
1972	22,698	2,706	30,260	12,273	150	2,946	576	g	71,609
1973	22,512	2,652	32,188	12,970	h	3,010	910	46	74,282
1974	21,732	2,565	30,890	12,719	h	3,309	1,272	56	72,543
1975	19,948	2,484	30,247	12,677	h	3,219	1,900	72	70,545
1976	20,345	i	35,175	13,585	h	3,065	2,111	81	74,362
1977	19,931	i	37,122	13,937	h	2,515	2,702	82	76,289
1978	20,000	i	37,965	13,890	h	3,142	3,024	68	78,089
1979	20,666	i	37,122	15,102	h	3,141	2,776	89	78,897
1980	20,394	i	34,202	15,388	h	3,118	2,739	114	75,955
1981	19,928	i	31,931	15,891	h	3,105	3,008	127	73,990
1982	18,505	i	30,231	15,300	h	3,561	3,131	108	70,837
1983	17,357	i	30,054	15,878	h	3,871	3,203	133	70,497
1984[R]	18,507	i	31,051	17,059	h	3,717	3,553	174	74,060
1985[R]	17,834	i	30,922	17,465	h	3,363	4,147	212	73,944
1986[R]	16,708	i	32,196	17,245	h	3,405	4,475	232	74,260
1987[P]	17,180	i	32,627	18,029	h	3,041	4,920	245	76,042

a. Represents production minus exports plus imports, and adjusted for change in inventories.

b. The Btu value per cubic foot for natural gas dry for 1965 and 1967 is 1,032; 1966 1,033; 1968–1971 1,031; 1972 1,027; 1973 1,021; 1974 1,024; 1975 1,021; 1976 1,020; 1977 1,021; 1978 1,019; 1979 1,021; 1980 1,026; 1981 1,027; 1982 1,028; 1983 and 1985 1,031; 1984 1030; 1986–1987 1029.

c. Marketed production minus shrinkage caused by liquids extraction.

d. Includes net imports of coke of −7 trillion Btu in 1973, 56 trillion Btu in 1974, 14 trillion Btu in 1975, 15 trillion Btu in 1977, 125 trillion Btu in 1978, 63 trillion Btu in 1979, −35 trillion Btu in 1980, −16 trillion Btu in 1981, −22 trillion Btu in 1982, −16 trillion Btu in 1983, −11 trillion in 1984, −13 trillion in 1985, −17 trillion Btu in 1986, and 9 trillion Btu in 1987.

e. See Table 3-1 for procedures used to determine Btu equivalents.

f. Includes energy from geothermal, wood or waste products.

g. Not available.

h. Included in "Bituminous Coal and Lignite."

i. Included in "Crude Petroleum and Products."

R–Revised. P–Preliminary.

Source: Prior to 1977, U.S. Bureau of Mines, 1977 and beyond, U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*

TABLE 10-3
ANNUAL CONSUMPTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLEAR POWER, IN THE UNITED STATES, 1965–1987

(Percentage)

Year	Natural Gas Dry	Natural Gas Liquids	Crude Petroleum and Products	Bituminous Coal and Lignite	Anthracite Coal	Hydro-power	Nuclear	Other	Grand Total Energy
1965	29.8	3.4	40.0	22.3	0.6	3.8	0.1	a	100.0
1970	32.8	3.7	40.3	18.6	0.3	4.0	0.3	a	100.0
1971	32.9	3.6	41.1	17.3	0.3	4.2	0.6	a	100.0
1972	31.7	3.8	42.3	17.1	0.2	4.1	0.8	a	100.0
1973	30.3	3.6	43.3	17.4	b	4.1	1.2	0.1	100.0
1974	30.0	3.4	42.6	17.5	b	4.6	1.8	0.1	100.0
1975	28.3	3.4	42.9	18.0	b	4.6	2.7	0.1	100.0
1976	27.4	c	47.3	18.3	b	4.1	2.8	0.1	100.0
1977	26.1	c	48.7	18.3	b	3.3	3.5	0.1	100.0
1978	25.6	c	48.6	17.8	b	4.0	3.9	0.1	100.0
1979	26.2	c	47.1	19.1	b	4.0	3.5	0.1	100.0
1980	26.8	c	45.0	20.3	b	4.1	3.6	0.2	100.0
1981	26.9	c	43.2	21.5	b	4.2	4.1	0.2	100.0
1982	26.1	c	42.7	21.6	b	5.0	4.4	0.2	100.0
1983	24.6	c	42.6	22.5	b	5.5	4.6	0.2	100.0
1984R	25.0	c	42.0	23.0	b	5.0	4.8	0.2	100.0
1985R	24.1	c	41.8	23.6	b	4.6	5.6	0.3	100.0
1986R	22.5	c	43.4	23.2	b	4.6	6.0	0.3	100.0
1987P	22.6	c	42.9	23.7	b	4.0	6.5	0.3	100.0

a Not available

b Included in "Bituminous Coal and Lignite."

c Included in "Crude Petroleum and Products."

R–Revised P–Preliminary

Source: Same as Table 10-2

TABLE 10-4
ENERGY CONSUMPTION PER CAPITA IN THE UNITED STATES, 1965–1987

Year	Total Energy Consumed (Trillions of Btu)	Natural Gas Consumed (Trillions of Btu)	Resident Population (Thousands)	Energy Consumed Per Capita (Millions of Btu)	Natural Gas Consumed Per Capita (Millions of Btu)	Gross National Product (Billions of 1982 $)	Total Energy Per Dollar of GNP (Thousands of Btu/1982 $)	Index of Industrial Production (1977 = 100)
1965	53,969	16,097	193,815	278	83	2,087.6	25.9	66.1
1970	67,143	22,029	203,302	330	108	2,416.2	27.8	78.5
1971	68,351	22,470	206,827	330	109	2,484.8	27.5	79.6
1972	71,609	22,698	209,284	342	108	2,608.5	27.5	87.3
1973	74,282	22,505	211,357	351	106	2,744.1	27.1	94.4
1974	72,543	21,725	213,342	340	102	2,729.3	26.6	93.0
1975	70,545	19,948	215,465	327	93	2,695.0	26.2	84.8
1976	74,362	20,345	217,563	342	94	2,826.7	26.3	92.6
1977	76,289	19,931	219,760	347	91	2,958.6	25.8	100.0
1978	78,089	20,000	222,095	352	90	3,115.2	25.1	106.5
1979	78,897	20,666	224,567	351	92	3,192.4	24.7	110.7
1980R	75,955	20,394	226,505	335	90	3,187.1	23.8	108.6
1981R	73,990	19,928	229,307	323	87	3,248.8	22.8	111.0
1982R	70,837	18,505	231,507	306	80	3,166.0	22.4	103.1
1983R	70,497	17,357	233,974	301	74	3,277.0	21.5	109.2
1984R	74,060	18,507	236,636	313	78	3,492.0	21.2	121.8
1985R	73,944	17,834	238,885	310	75	3,618.7	20.4	123.8
1986R	74,260	16,708	241,596	307	69	3,701.7	20.1	125.1
1987P	76,042	17,180	243,773	312	70	3,847.0	19.8	129.8

R–Revised. P–Preliminary.

Source: U.S. Department of Energy, U.S. Bureau of the Census and the Federal Reserve Board.

TABLE 10-5
GAS UTILITY INDUSTRY AVERAGE ANNUAL CONSUMPTION PER CUSTOMER, BY CLASS OF SERVICE, 1965-1987[a]

(MMBtu/Customer)

Year	Total	Residential	Commercial	Industrial[b]	Other[b]
1965	320.9	116.5	482.1	36,982.6	12,009.8
1966	336.4	118.8	510.0	38,259.3	12,755.1
1967	345.2	121.5	537.8	38,710.3	11,397.0
1968	362.4	124.1	567.6	40,378.0	13,129.2
1969	376.7	128.4	611.0	42,220.0	11,327.2
1970	386.8	129.2	640.9	42,386.7	12,232.3
1971	395.0	129.9	673.8	42,235.0	17,064.6
1972	397.7	130.4	697.3	41,948.8	16,428.8
1973	377.0	124.5	684.6	40,051.7	15,129.5
1974	361.1	119.6	676.1	42,066.8	12,586.1
1975	333.6	121.9	708.9	37,253.5	12,039.8
1976	329.7	121.3	718.6	40,022.3	3,511.6
1977	316.8	118.7	714.8	39,217.5	3,996.3
1978	322.2	121.0	743.6	36,635.8	4,511.8
1979	330.3	118.6	726.5	40,345.3	5,133.9
1980[R]	326.4	111.0	701.4	42,559.4	3,454.7
1981	320.7	104.4	666.4	44,020.2	3,235.0
1982[R]	292.9	107.1	680.6	36,514.2	3,244.5
1983	263.5	99.1	625.1	32,759.3	2,996.9
1984	266.8	102.0	642.3	33,253.2	3,094.2
1985	252.5	98.3	612.7	31,473.1	2,739.9
1986[R]	219.4	94.0	575.3	24,434.5	3,215.2
1987	204.4	92.6	541.7	21,375.4	2,885.9

a. Excludes customers purchasing for resale and sales for resale. Customer data is based on yearly averages.

b. Prior to 1976, "Other" electric generation (See Table 6-12) is included in the "Other" class of service. For 1976 and beyond, all electric generation is included in the Industrial category.

R – Revised.

TABLE 10-6
GAS UTILITY INDUSTRY AVERAGE ANNUAL RESIDENTIAL CONSUMPTION PER CUSTOMER BY STATE, 1965-1987[a]

(MMBtu / Customer)

Division and State	1965	1970	1975	1980	1985	1986R	1987
United States	**116.5**	**129.2**	**121.9**	**111.0**	**98.3**	**94.0**	**92.6**
New England	**67.7**	**86.0**	**85.3**	**90.0**	**88.8**	**91.7**	**93.2**
Connecticut	68.7	87.6	84.6	88.1	85.8	91.7	93.2
Maine	32.1	38.2	38.7	43.2	44.3	46.1	45.8
Massachusetts	69.2	87.0	86.0	91.3	89.9	91.6	93.1
New Hampshire	74.1	93.3	95.1	97.7	94.7	99.6	95.8
Rhode Island	65.0	82.9	84.0	86.7	89.3	91.8	94.8
Vermont	23.1	65.2	93.3	102.8	105.3	107.0	103.9
Middle Atlantic	**91.2**	**107.3**	**102.1**	**102.8**	**94.7**	**97.7**	**97.4**
New Jersey	73.5	92.2	88.5	89.7	87.8	91.0	93.3
New York	77.7	91.5	89.4	90.7	87.0	89.9	89.5
Pennsylvania	128.7	146.5	135.1	133.3	112.9	116.2	114.1
East North Central	**159.3**	**175.7**	**164.5**	**158.6**	**137.1**	**133.4**	**125.2**
Illinois	139.9	164.8	168.9	162.5	147.3	145.0	132.2
Indiana	134.1	159.9	151.5	143.9	122.8	118.5	112.0
Michigan	173.5	189.1	167.7	172.8	145.8	139.9	130.9
Ohio	188.5	193.5	171.2	158.3	131.8	130.3	128.1
Wisconsin	129.0	145.0	139.0	130.8	116.5	108.6	99.1
West North Central	**158.9**	**167.9**	**152.6**	**131.3**	**117.4**	**109.1**	**99.2**
Iowa	162.1	167.8	152.2	127.7	116.4	109.6	97.5
Kansas	156.6	165.8	150.4	126.6	110.8	98.8	95.9
Minnesota	167.3	175.6	159.7	138.9	129.2	121.6	103.2
Missouri	152.0	165.5	148.9	133.2	112.7	106.8	100.7
Nebraska	162.3	167.5	155.2	128.9	118.4	106.8	96.9
North Dakota	164.5	171.4	163.0	127.6	124.5	112.2	96.5
South Dakota	158.5	153.2	145.0	117.4	115.8	106.8	92.6
South Atlantic	**95.9**	**111.0**	**96.3**	**93.2**	**78.0**	**80.0**	**82.2**
Delaware	85.6	109.0	93.6	93.4	81.1	87.6	87.8
District of Columbia	87.8	102.7	95.9	103.5	90.3	98.3	96.7
Florida	27.1	48.2	38.6	40.0	32.5	32.9	33.9
Georgia	103.1	123.9	103.5	96.9	81.7	77.7	82.5
Maryland	95.3	110.6	97.5	96.6	85.0	91.5	89.2
North Carolina	89.8	112.1	92.7	97.1	76.6	78.0	84.8
South Carolina	75.9	91.1	72.7	77.3	58.1	60.7	68.0
Virginia	94.0	111.1	100.1	99.7	84.3	89.6	92.7
West Virginia	159.0	161.0	149.4	131.0	108.9	113.9	111.2
East South Central	**111.5**	**126.0**	**107.1**	**102.4**	**85.0**	**82.9**	**84.9**
Alabama	90.7	106.9	91.2	86.9	73.6	71.3	74.8
Kentucky	144.9	157.4	136.7	130.4	104.2	103.5	102.4
Mississippi	89.0	105.5	86.6	85.9	73.5	69.2	73.2
Tennessee	114.3	126.5	105.5	101.7	85.5	83.6	85.7
West South Central	**92.2**	**104.6**	**95.9**	**84.3**	**74.9**	**67.9**	**72.7**
Arkansas	113.8	133.0	114.0	95.6	87.2	79.7	85.0
Louisana	82.1	95.9	81.9	77.0	66.1	62.3	66.8
Oklahoma	116.3	126.8	120.6	103.5	95.3	84.6	84.6
Texas	86.3	97.6	91.5	80.2	70.4	63.4	69.5
Mountain	**140.2**	**140.5**	**131.0**	**103.9**	**94.0**	**83.4**	**84.0**
Arizona	77.0	78.4	77.3	59.1	54.6	46.6	53.0
Colorado	153.4	155.0	147.2	119.8	99.7	87.9	92.0
Idaho	118.0	114.7	110.7	79.5	81.3	76.3	69.8
Montana	185.0	175.5	171.2	126.1	123.7	106.6	99.6
Nevada	103.1	112.5	113.2	87.5	73.2	63.1	68.1
New Mexico	134.4	130.3	126.6	99.1	84.4	78.9	85.2
Utah	201.2	212.1	180.1	139.0	134.9	122.2	108.2
Wyoming	173.0	180.5	161.7	128.6	122.7	106.1	97.4
Pacific	**104.6**	**105.7**	**109.9**	**81.6**	**75.6**	**65.2**	**67.2**
Alaska	230.0	199.3	221.3	216.9	205.8	183.0	179.8
California	105.0	104.6	109.4	80.5	73.6	63.0	65.7
Hawaii	27.2	33.7	29.1	25.0	20.3	19.6	19.6
Oregon	90.6	113.2	107.0	79.8	83.5	71.7	67.6
Washington	115.5	128.3	122.0	95.5	94.0	89.1	81.9

a. Customer data is based on yearly averages.
R – Revised.

TABLE 10-7

HEATING DEGREE DAYS[a] BY CALENDAR YEAR AND HEATING SEASONS, 1987-1988, AND THIRTY-YEAR NORMALS

Division and State	Calendar Year Degree Days			Heating Season Degree Days[b]		
	30-Year[c] Normals 1951-1980	1986	1987	30-Year[c] Normals 1951/52-1980/81	1986-1987	1987-1988
United States	**4,694**	**4,429**	**4,454**	**3,798**	**3,657**	**3,744**
New England	**6,562**	**6,489**	**6,518**	**5,071**	**5,069**	**5,005**
Connecticut	6,146	5,902	5,891	4,839	4,703	4,691
Maine	7,945	8,143	7,961	5,892	6,054	5,919
Massachusetts	6,322	6,315	6,420	4,913	4,969	4,892
New Hampshire	7,599	7,419	7,367	5,752	5,687	5,615
Rhode Island	5,968	5,793	5,928	4,629	4,535	4,521
Vermont	7,979	7,968	7,954	6,045	6,137	5,974
Middle Atlantic	**5,820**	**5,675**	**5,708**	**4,661**	**4,603**	**4,595**
New Jersey	5,424	5,304	5,385	4,422	4,374	4,371
New York	5,943	5,752	5,765	4,730	4,645	4,623
Pennsylvania	5,881	5,793	5,821	4,708	4,680	4,693
East North Central	**6,375**	**6,142**	**5,812**	**5,131**	**4,810**	**5,011**
Illinois	6,175	6,299	5,638	5,083	4,752	5,028
Indiana	5,871	5,588	5,407	4,815	4,567	4,670
Michigan	6,823	6,643	6,188	5,363	5,023	5,213
Ohio	5,897	5,585	5,506	4,766	4,549	4,624
Wisconsin	7,665	7,413	6,672	6,004	5,415	5,852
West North Central	**6,657**	**6,239**	**5,721**	**5,419**	**4,867**	**5,281**
Iowa	6,932	6,578	5,835	5,663	5,024	5,434
Kansas	4,988	4,475	4,546	4,271	4,024	4,258
Minnesota	8,771	8,347	7,181	6,855	5,915	6,655
Missouri	5,091	4,777	4,673	4,344	4,109	4,329
Nebraska	6,435	5,868	5,603	5,261	4,684	5,105
North Dakota	9,481	8,818	7,711	7,277	6,384	6,696
South Dakota	7,714	7,236	6,461	6,091	5,272	5,864
South Atlantic	**2,999**	**2,793**	**3,050**	**2,603**	**2,543**	**2,592**
Delaware	4,784	4,574	4,690	4,007	3,956	3,844
District of Columbia	d	d	d	d	d	d
Florida	720	579	698	713	578	710
Georgia	2,788	2,441	2,805	2,507	2,360	2,468
Maryland	4,811[e]	4,658[e]	4,719[e]	4,034[e]	3,988[e]	3,936[e]
North Carolina	3,481	3,206	3,672	3,043	3,053	3,084
South Carolina	2,743	2,456	2,916	2,495	2,466	2,571
Virginia	4,532	4,240	4,525	3,661	3,747	3,687
West Virginia	5,250	4,986	5,151	4,270	4,158	4,169
East South Central	**3,555**	**3,299**	**3,466**	**3,109**	**2,971**	**3,075**
Alabama	2,828	2,589	2,813	2,549	2,411	2,529
Kentucky	4,544	4,238	4,348	3,861	3,722	3,753
Mississippi	2,510	2,354	2,527	2,308	2,269	2,361
Tennessee	3,954	3,671	3,833	3,422	3,232	3,391
West South Central	**2,313**	**2,094**	**2,327**	**2,142**	**2,203**	**2,247**
Arkansas	3,327	3,049	3,186	2,991	2,931	3,054
Louisiana	1,794	1,630	1,831	1,703	1,717	1,742
Oklahoma	3,571	3,258	3,480	3,213	3,236	3,338
Texas	2,035	1,829	2,089	1,908	2,009	2,034
Mountain	**5,529**	**5,097**	**5,375**	**4,182**	**4,174**	**4,262**
Arizona	2,313	1,843	2,321	2,037	2,026	1,987
Colorado	7,123	6,837	7,276	5,192	5,320	5,558
Idaho	6,935	6,502	6,260	5,061	4,944	4,962
Montana	8,260	7,573	7,140	5,822	5,372	5,424
Nevada	4,263	3,722	4,134	3,373	3,407	3,416
New Mexico	4,756	4,396	4,959	3,842	4,006	3,948
Utah	6,555	6,052	6,116	4,966	4,862	5,103
Wyoming	8,023	7,542	7,532	5,744	5,606	5,805
Pacific	**3,322**	**2,829**	**3,024**	**2,432**	**2,305**	**2,565**
Alaska	f	f	f	f	f	f
California	2,703	2,192	2,502	2,060	1,955	1,924
Hawaii	f	f	f	f	f	f
Oregon	5,255	4,827	4,696	3,573	3,435	3,511
Washington	5,637	5,201	4,960	3,840	3,593	3,695

a. See glossary for definitions of (heating) degree days. Division heating degree days are the weighted average of all states in a region, according to the 1980 population. National heating degree days are the weighted average of all divisions, according to the 1980 population.

b. Heating season is defined as November through March period.

c. The transference of many weather stations between city locations and nearby airports at some time during the 30 year period has led to the introduction of slight inconsistencies in the average data.

d. Included in Maryland.

e. Includes the District of Columbia.

f. Not available.

Source: National Oceanic and Atmospheric Administration, *Monthly State, Regional and National Heating Degree Days Weighted by Population.*

TABLE 10-8
GAS UTILITY INDUSTRY AVERAGE ANNUAL CONSUMPTION PER CUSTOMER BY STATE AND CLASS OF SERVICE, 1987[a]

(MMBtu/Customer)

Division and State	Total	Class of Service Residential	Commercial	Industrial	Electric Generation	Other
United States	**204.4**	**92.6**	**541.7**	**13,025.1**	**3,295,070.7**	**2,885.9**
New England	**192.4**	**93.2**	**612.5**	**6,972.5**	**3,883,900.0**	**695.3**
Connecticut	192.0	93.2	675.4	7,579.5	162,650.0	1,055.8
Maine	176.6	45.8	376.8	12,294.4	b	b
Massachusetts	196.7	93.1	634.9	6,699.8	4,090,870.0	726.9
New Hampshire	176.4	95.8	524.9	11,511.5	b	840.1
Rhode Island	166.8	94.8	386.2	4,573.3	4,071,600.0	11,984.6
Vermont	261.5	103.9	790.5	72,269.6	b	50.1
Middle Atlantic	**162.7**	**97.4**	**510.6**	**8,754.1**	**3,394,392.3**	**3,014.4**
New Jersey	170.9	93.3	479.1	9,583.9	4,856,920.0	10,621.7
New York	139.2	89.5	436.8	4,995.9	4,814,450.0	2,639.4
Pennsylvania	195.5	114.1	667.7	16,931.1	146,175.0	4,928.2
East North Central	**189.2**	**125.2**	**599.2**	**6,487.5**	**79,728.4**	**2,344.1**
Illinois	203.0	132.2	650.2	5,595.4	88,608.0	141.7
Indiana	196.1	112.0	523.2	13,159.8	146,650.0	2,618.8
Michigan	180.4	130.9	616.1	4,202.9	51,187.5	172,000.0
Ohio	182.3	128.1	600.9	7,410.6	40,306.3	2,551.2
Wisconsin	177.0	99.1	511.0	6,589.6	171,175.0	91,111.1
West North Central	**198.5**	**99.2**	**567.5**	**18,129.6**	**61,369.1**	**2,850.4**
Iowa	208.4	97.5	482.9	26,839.6	46,775.9	925.4
Kansas	209.5	95.9	529.1	12,392.4	48,932.7	8,327.1
Minnesota	220.0	103.2	547.4	16,584.2	132,845.0	2,592.1
Missouri	174.1	100.7	719.7	49,462.4	82,962.5	2,202.2
Nebraska	192.6	96.9	494.8	16,131.6	54,477.3	757.9
North Dakota	190.6	96.5	734.0	27,906.3	12,400.0	1,000.0
South Dakota	173.4	92.6	509.8	8,486.4	68,100.0	103,600.0
South Atlantic	**238.1**	**82.2**	**649.6**	**18,502.6**	**5,068,791.2**	**1,052.7**
Delaware	238.7	87.8	621.9	38,222.3	1,058,000.0	b
District of Columbia	213.4	96.7	1,252.6	b	b	43,100.0
Florida	545.6	33.9	834.4	86,826.5	8,049,605.3	8,307.1
Georgia	178.7	82.5	592.6	16,533.0	378,166.7	118.5
Maryland	154.6	89.2	569.4	3,746.7	2,466,066.7	7,042.9
North Carolina	274.6	84.8	512.8	23,320.3	502,300.0	10,304.7
South Carolina	301.4	68.0	523.0	49,196.3	144,400.0	697.3
Virginia	204.7	92.7	777.9	12,246.3	b	380.9
West Virginia	199.6	111.2	592.4	28,893.4	3,761,100.0	31,167.7
East South Central	**203.0**	**84.9**	**507.0**	**27,168.0**	**331,920.0**	**976.2**
Alabama	184.4	74.8	553.0	25,888.6	115,150.0	319.2
Kentucky	170.3	102.4	460.8	14,459.1	b	3,829.7
Mississippi	206.5	73.2	343.6	32,150.8	393,641.7	2,333.1
Tennessee	258.8	85.7	598.5	34,280.4	11,300.0	224.3
West South Central	**333.3**	**72.7**	**431.1**	**34,283.3**	**12,065,227.8**	**8,107.1**
Arkansas	167.9	85.0	408.8	18,154.8	11,911.1	2,655.8
Louisiana	261.0	66.8	354.6	87,229.9	2,579,853.3	21,190.7
Oklahoma	171.0	84.6	389.3	19,619.5	235,260.0	839.8
Texas	421.7	69.5	466.2	33,887.5	24,461,640.0	6,208.0
Mountain	**155.3**	**84.0**	**535.4**	**14,511.6**	**346,291.9**	**3,616.9**
Arizona	121.0	53.0	544.5	26,733.3	1,172,916.7	3,110.7
Colorado	157.2	92.0	557.5	18,930.6	163,910.0	3,301.6
Idaho	176.0	69.8	429.5	20,063.7	b	b
Montana	182.9	99.6	497.4	14,107.5	15,400.0	24,772.7
Nevada	139.2	68.1	734.6	25,347.4	306,766.7	29,742.9
New Mexico	153.4	85.2	415.2	2,837.7	230,362.5	3,140.3
Utah	180.2	108.2	511.9	35,235.5	55,740.0	10,900.0
Wyoming	187.6	97.4	614.7	22,289.8	158,600.0	950.0
Pacific	**185.8**	**67.2**	**483.8**	**8,441.6**	**25,404,913.6**	**24,098.3**
Alaska	510.7	179.8	976.0	b	2,412,014.3	b
California	176.6	65.7	457.2	6,890.4	38,715,978.6	32,583.5
Hawaii	96.2	19.6	809.7	616.3	b	b
Oregon	214.2	67.6	399.4	48,517.1	b	b
Washington	290.0	81.9	651.8	18,807.6	300.0	7,748.8

a. Excludes customers purchasing for resale and sales for resale. Customer data is based on yearly averages.

b. No sales reported.

SECTION 11
APPLIANCE AND HOUSING DATA

	1987	% Change 87/86
Manufacturer Shipments		
(Thousands of Units)		
Central Heating	2,263	− 1.7
Ranges	2,143	+10.4
Water Heaters	3,951	+ 6.0
Clothes Dryers	1,037	+10.8
New One-Family Houses Completed		
(Thousands of Units)		
Gas Heat	581	+10.5

Note: Certain tables in this section could not be updated because current information was not available.

TABLE 11-1
MANUFACTURER SHIPMENTS OF GAS RANGES, WATER HEATERS AND CLOTHES DRYERS, 1965-1987[a]

(Thousands of Units)

Year	Domestic Range Sales			Automatic Domestic Water Heater Sales			Automatic Gas Dryers[c]
	Free-Standing[b]	Built-in	Total	Natural Gas	L.P. Gas	Total	
1965	1,976	291	2,267	2,497	240	2,737	710
1966	1,931	232	2,163	2,341	296	2,637	751
1967	1,954	169	2,123	2,246	309	2,555	829
1968	2,102	184	2,286	2,411	345	2,756	876
1969	2,282	189	2,471	2,386	356	2,742	905
1970	2,195	167	2,362	2,404	381	2,785	852
1971	2,363	186	2,549	2,645	443	3,088	847
1972	2,467	194	2,661	2,676	487	3,163	936
1973	2,312	169	2,481	2,568	512	3,080	926
1974	1,825	125	1,950	2,210	359	2,569	739
1975	1,493	125	1,618	2,388	257	2,645	672
1976	1,693	131	1,824	2,695	417	3,112	707
1977	1,615	131	1,746	d	d	3,070	736
1978	1,665	129	1,794	2,578	343	2,921	757
1979	1,670	129	1,799	2,548	339	2,887	757
1980	1,437	102	1,539	2,498	320	2,818	682
1981	1,401	95	1,496	2,461	324	2,785	639
1982	1,289	79	1,368	2,771	270	3,041	584
1983	1,477	96	1,573	2,953	219	3,172	672
1984	1,626	106	1,732	3,281	221	3,502	754
1985	1,729	84	1,813	3,303	226	3,529	834
1986	1,854	86	1,940	3,485	244	3,729	936
1987	2,047	96	2,143	3,673	278	3,951	1,037

a. Shows shipments by manufacturers, expanded from returns of reporting companies to represent industry-wide coverage. Shipments of appliances for L.P. gas users include those for use by customers obtaining such gas through utility mains, as well as bottled gas users.

b. Free-standing includes free-standing, "set-in" and high-oven ranges.

c. Excludes combination washer-dryer units.

d. Not Available.

R-Revised.

Source: Gas Appliance Manufacturers Association, *Statistical Highlights*, Ten Year Summary, 1978-1987.

TABLE 11-2
MANUFACTURER SHIPMENTS OF GAS HEATING EQUIPMENT, 1965-1987[a]

(Thousands of Units)

Year	Central Heating Equipment				Floor and Wall Furnaces Total[b]	Direct Heating Equipment Total
	Warm Air Furnaces	Conversion Burners	Boilers	Total		
1965	1,238	93	200	1,531	501	994
1966	1,213	93	186	1,492	515	1,034
1967	1,146	84	174	1,404	471	920
1968	1,428	79	187	1,694	555	974
1969	1,546	77	176	1,799	576	1,043
1970	1,471	66	164	1,701	545	781
1971	1,795	53	157	2,005	612	783
1972	2,066	40	156	2,262	762	708
1973	1,719	43	147	1,909	652	678
1974	1,476	89	123	1,688	409	488
1975	1,186	39	88	1,313	435	332
1976	1,554	26	113	1,693	523	306
1977	1,508	c	113	1,621	481	193
1978	1,636	c	126	1,762	532	175
1979	1,863	c	221	2,084	365	193
1980	1,446	c	293	1,739	297	222
1981	1,417	c	162	1,579	253	133
1982	1,156	c	148	1,304	260	182
1983	1,662	c	148	1,810	363	203
1984	1,849	c	180	2,029	391	256
1985	1,822	c	192	2,014	430	283
1986	2,105	c	196	2,301	427	281
1987	2,073	c	190	2,263	421	268

a. Shows shipments by manufacturers; expanded from returns of reporting companies to represent industry-wide coverage.
b. Includes RV central and wall furnaces.
c. Not available.
Source: Gas Applicance Manufacturers Association, *Statistical Highlights*, Ten Year Summary, 1978-1987.

TABLE 11-3
MANUFACTURER SHIPMENTS OF RESIDENTIAL GAS APPLIANCES, BY MONTH, 1987

(Thousands of Units)

Month	Ranges		Automatic Water Heaters	Dryers[b]	Central Heating	
	Free-Standing[a]	Built-in			Warm Air Furnaces	Boilers
January	172.9	7.4	345.8	93.2	168.4	12.6
February	152.4	7.7	340.0	80.4	152.7	12.3
March	174.5	9.0	351.9	90.7	148.8	11.7
April	149.3	7.7	353.2	73.5	137.6	8.3
May	146.9	7.2	290.5	68.8	118.3	9.7
June	175.2	8.0	330.3	95.3	139.8	14.4
July	156.6	7.0	297.2	81.8	156.7	12.2
August	157.5	7.0	289.8	87.0	203.0	17.9
September	191.0	9.6	311.7	104.0	234.0	22.0
October	201.4	9.2	360.6	93.0	240.6	28.4
November	180.4	7.5	310.4	89.0	193.7	22.5
December	188.4	8.9	369.3	80.2	179.3	17.6
Total	2,046.5	96.2	3,950.7	1,036.9	2,072.9	189.6

a. Free-standing includes free-standing, "set-in" and high-oven ranges.
b. Excludes combination washer-dryer units.
Source: Gas Appliance Manufacturers Association, *Statistical Highlights*, December 1987.

TABLE 11-4
NUMBER OF OCCUPIED HOUSING UNITS,[a] BY TYPE OF HEATING FUEL AND BY CENSUS REGION, 1975-1985

(Thousands of Occupied Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other[c] / None
1975					
United States	**72,523**	**40,933**	**9,173**	**16,299**	**6,117**
Northeast	16,508	6,446	802	8,875	386
Midwest	19,393	13,666	1,154	3,027	1,546
South	23,105	11,352	4,965	3,508	3,280
West	13,518	9,469	2,253	889	907
1976					
United States	**74,005**	**41,219**	**10,151**	**16,451**	**6,184**
Northeast	16,544	6,140	846	9,161	397
Midwest	19,722	13,803	1,366	3,004	1,549
South	23,742	11,449	5,498	3,488	3,307
West	13,998	9,826	2,441	798	933
1977					
United States	**75,280**	**41,543**	**11,146**	**16,060**	**6,531**
Northeast	16,637	6,151	958	9,103	425
Midwest	19,855	13,893	1,506	2,843	1,613
South	24,379	11,577	6,033	3,335	3,434
West	14,407	9,922	2,649	778	1,058
1978					
United States	**77,167**	**42,522**	**12,258**	**16,071**	**6,316**
Northeast	16,952	6,301	999	9,252	400
Midwest	20,171	14,140	1,685	2,817	1,529
South	25,093	11,956	6,561	3,263	3,313
West	14,951	10,125	3,013	739	1,074
1979					
United States	**78,572**	**43,323**	**13,244**	**15,708**	**6,297**
Northeast	17,122	6,558	1,109	9,056	399
Midwest	20,565	14,428	1,864	2,724	1,549
South	25,584	12,054	7,074	3,191	3,265
West	15,301	10,283	3,197	737	1,084
1980					
United States	**80,072**	**44,398**	**14,208**	**14,868**	**6,598**
Northeast	17,264	6,928	1,169	8,685	482
Midwest	20,842	14,688	2,036	2,503	1,615
South	26,286	12,290	7,615	3,009	3,372
West	15,680	10,492	3,388	671	1,129
1981					
United States	**83,175**	**46,084**	**15,486**	**14,494**	**7,111**
Northeast	17,851	7,335	1,281	8,642	593
Midwest	21,565	15,308	2,211	2,328	1,718
South	27,431	12,725	8,225	2,905	3,576
West	16,328	10,716	3,770	619	1,223
1982					
United States	**84,638**	**46,700**	**15,684**	**13,031**	**9,223**
Northeast	18,221	7,741	1,319	8,226	934
Midwest	21,618	15,656	2,172	1,774	2,015
South	27,931	12,346	8,557	2,559	4,470
West	16,868	10,956	3,635	472	1,805
1985					
United States	**88,425**	**45,328**	**18,361**	**12,441**	**12,295**
Northeast	18,729	7,339	1,642	7,998	1,750
Midwest	22,142	15,253	2,430	1,698	2,761
South	30,064	11,839	10,664	2,153	5,408
West	17,490	10,896	3,626	592	2,376

a. Units include both single-family and multifamily.

b. Oil includes kerosene.

c. Other includes LP gas, coal, wood and solar heat.

Source: U.S. Bureau of the Census, Current Housing Reports—Series H-150 *Annual Housing Survey.* Part A: General Housing Characteristics.

APPLIANCE AND HOUSING DATA

TABLE 11-5
NEW ONE FAMILY HOUSES[a] COMPLETED, BY TYPE OF HEATING FUEL AND BY CENSUS REGION, 1979-1987

(Thousands of Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other/None
1979					
United States	**1,301**	**512**	**662**	**86**	**41**
Northeast	135	32	47	48	7
Midwest	294	162	96	22	14
South	535	147	365	14	9
West	337	170	154	c	12
1980					
United States	**957**	**393**	**483**	**29**	**52**
Northeast	100	35	36	18	11
Midwest	170	101	47	6	16
South	455	136	303	5	11
West	232	121	97	c	14
1981					
United States	**819**	**339**	**407**	**16**	**57**
Northeast	87	30	34	11	12
Midwest	140	87	37	c	13
South	408	128	262	c	16
West	183	94	74	c	15
1982					
United States	**632**	**252**	**315**	**17**	**48**
Northeast	79	28	27	14	10
Midwest	92	53	24	3	13
South	340	112	214	c	13
West	121	59	50	c	12
1983					
United States	**924**	**400**	**448**	**22**	**53**
Northeast	106	40	38	18	9
Midwest	142	92	35	c	13
South	476	163	296	c	15
West	200	105	79	c	16
1984					
United States	**1,025**	**460**	**492**	**24**	**49**
Northeast	129	53	46	21	9
Midwest	156	110	30	c	14
South	508	170	325	c	12
West	233	127	91	c	14
1985					
United States	**1,072**	**466**	**528**	**36**	**42**
Northeast	168	65	63	32	8
Midwest	151	111	31	c	7
South	514	146	354	c	11
West	239	144	79	c	16
1986					
United States	**1,118**	**526**	**496**	**51**	**45**
Northeast	193	80	59	47	7
Midwest	170	132	30	c	6
South	502	152	334	c	14
West	253	162	74	c	17
1987					
United States	**1,119**	**581**	**444**	**57**	**37**
Northeast	195	86	52	52	5
Midwest	201	166	26	3	6
South	464	154	302	c	8
West	258	175	64	c	19

a. Includes only privately-owned housing units.
b. Does not include kerosene.
c. Withheld because estimate did not meet Bureau of the Census publication standards.
Source: U.S. Bureau of the Census, Construction Reports—Series C25, *Characteristics of New Housing*, 1987.

TABLE 11-6
UNITS[a] IN NEW MULTIFAMILY BUILDINGS COMPLETED, BY TYPE OF HEATING FUEL AND BY CENSUS REGION, 1979-1987

(Thousands of Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other/None
1979					
United States	**570**	**150**	**386**	**27**	**6**
Northeast	53	11	21	21	c
Midwest	121	50	69	2	1
South	227	22	200	4	2
West	169	68	97	c	4
1980					
United States	**545**	**165**	**362**	**12**	**6**
Northeast	46	16	20	10	c
Midwest	104	46	57	c	1
South	242	36	204	2	c
West	153	67	81	c	5
1981					
United States	**447**	**142**	**293**	**7**	**4**
Northeast	40	23	11	5	c
Midwest	78	42	36	c	c
South	218	33	184	1	c
West	111	44	63	c	4
1982					
United States	**374**	**103**	**255**	**9**	**7**
Northeast	41	15	17	8	1
Midwest	51	32	17	c	2
South	199	21	176	c	1
West	82	34	45	c	3
1983					
United States	**467**	**133**	**327**	**3**	**4**
Northeast	33	21	9	c	d
Midwest	59	37	22	c	1
South	270	31	238	c	1
West	104	44	58	c	3
1984					
United States	**627**	**165**	**452**	**5**	**5**
Northeast	40	16	18	c	1
Midwest	65	34	32	c	d
South	358	46	312	c	d
West	164	70	90	c	4
1985					
United States	**631**	**198**	**425**	**3**	**5**
Northeast	46	25	17	3	1
Midwest	79	36	42	c	1
South	298	34	263	c	1
West	207	101	103	c	3
1986					
United States	**636**	**221**	**400**	**8**	**7**
Northeast	61	33	19	7	2
Midwest	100	43	56	c	1
South	259	33	224	1	1
West	216	112	101	c	3
1987					
United States	**545**	**222**	**306**	**5**	**12**
Northeast	60	35	18	5	2
Midwest	102	63	37	d	2
South	194	30	162	d	2
West	190	95	89	d	6

a. Includes only privately-owned housing units.

b. Does not include kerosene.

c. Withheld because estimate did not meet Bureau of the Census publication standards.

d. Fewer than 500 units.

Source: U.S. Bureau of the Census, Construction Reports—Series C25, *Characteristics of New Housing*, 1987.

TABLE 11-7
NUMBER OF OCCUPIED HOUSING UNITS,[a] BY TYPE OF COOKING FUEL AND BY CENSUS REGION, 1974-1985

(Thousands of Occupied Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other[c]/None
1974					
United States	**70,831**	**31,908**	**32,720**	**82**	**6,120**
Northeast	16,281	9,211	5,747	46	1,277
Midwest	18,993	8,908	8,423	14	1,648
South	22,489	7,985	11,797	19	2,688
West	13,067	5,803	6,754	4	506
1975					
United States	**72,523**	**32,493**	**33,944**	**76**	**6,011**
Northeast	16,508	9,244	5,973	27	1,264
Midwest	19,393	9,051	8,699	16	1,627
South	23,105	8,229	12,224	31	2,621
West	13,518	5,968	7,048	3	499
1976					
United States	**74,003**	**32,299**	**35,669**	**44**	**5,991**
Northeast	16,545	9,086	6,178	14	1,267
Midwest	19,722	8,978	9,165	7	1,572
South	23,741	8,179	12,897	22	2,643
West	13,996	6,057	7,429	1	509
1977					
United States	**75,280**	**32,207**	**37,042**	**45**	**5,986**
Northeast	16,635	9,096	6,280	17	1,242
Midwest	19,857	8,857	9,426	14	1,560
South	24,379	8,146	13,563	11	2,659
West	14,408	6,107	7,773	2	526
1978					
United States	**77,167**	**32,576**	**38,779**	**107**	**5,705**
Northeast	16,952	9,185	6,568	44	1,155
Midwest	20,171	8,847	9,833	32	1,459
South	25,094	8,242	14,234	24	2,594
West	14,950	6,302	8,144	7	497
1979					
United States	**78,572**	**32,551**	**40,345**	**84**	**5,593**
Northeast	17,123	9,162	6,752	42	1,166
Midwest	20,565	8,958	10,180	15	1,413
South	25,585	8,171	14,873	22	2,519
West	15,299	6,258	8,540	6	496
1980					
United States	**80,072**	**32,664**	**41,729**	**152**	**5,528**
Northeast	17,264	9,234	6,828	65	1,138
Midwest	20,842	8,898	10,516	30	1,398
South	26,286	8,196	15,531	37	2,521
West	15,680	6,336	8,852	20	471
1985					
United States	**88,425**	**33,794**	**49,057**	**153**	**5,421**
Northeast	18,729	9,526	7,874	20	1,309
Midwest	22,142	9,135	11,826	24	1,157
South	30,064	8,298	19,201	55	2,510
West	17,490	6,834	10,156	54	446

a. Units include both single-family and multifamily.

b. Oil includes kerosene.

c. Other includes LP gas, coal and wood.

Sources: For 1974-1977, U.S. Bureau of the Census, Current Housing Reports—Series H-150, *Annual Housing Survey.* Part A. For 1978-1980, U.S. Bureau of the Census, Current Housing Reports—Series H-150, *Annual Housing Survey.* Part F: Energy-Related Housing Characteristics.

TABLE 11-8

NUMBER OF OCCUPIED HOUSEHOLDS BY TYPE OF FUEL USED FOR WATER HEATING AND CLOTHES DRYING, AND BY CENSUS REGION, 1984

(Millions of Households)

Region	Total	Gas	Electricity	Oil[a]	Other[b]/None
Water Heating					
United States	**86.3**	**46.9**	**28.9**	**5.7**	**4.8**
Northeast	18.1	8.5	4.0	5.1	.5
Midwest	21.4	15.2	5.0	c	1.2
South	29.0	11.7	15.4	.2	1.7
West	17.0	11.5	4.5	c	1.0
Clothes Drying					
United States	**86.3**	**12.6**	**39.6**	**d**	**34.1**
Northeast	18.3	2.9	7.6	d	7.8
Midwest	21.7	4.2	9.6	d	7.9
South	29.3	2.7	14.7	d	11.9
West	17.2	2.7	7.7	d	6.8

NUMBER OF OCCUPIED HOUSEHOLDS BY TYPE OF FUEL USED FOR WATER HEATING AND CLOTHES DRYING, AND BY CENSUS REGION, 1985

(Millions of Households)

Region	Total	Gas	Electricity	Oil[a]	Other[b]/None
Water Heating					
United States	**88.4**	**49.6**	**30.8**	**d**	**8.0**
Northeast	18.7	8.8	3.9	d	6.0
Midwest	22.1	16.0	5.8	d	.3
South	30.1	12.9	16.1	d	1.0
West	17.5	12.0	5.0	d	.5
Clothes Drying					
United States	**88.4**	**12.8**	**42.2**	**d**	**33.4**
Northeast	18.7	2.8	7.4	d	8.5
Midwest	22.1	5.0	10.0	d	7.1
South	30.1	2.1	16.7	d	11.3
West	17.5	2.9	8.1	d	6.5

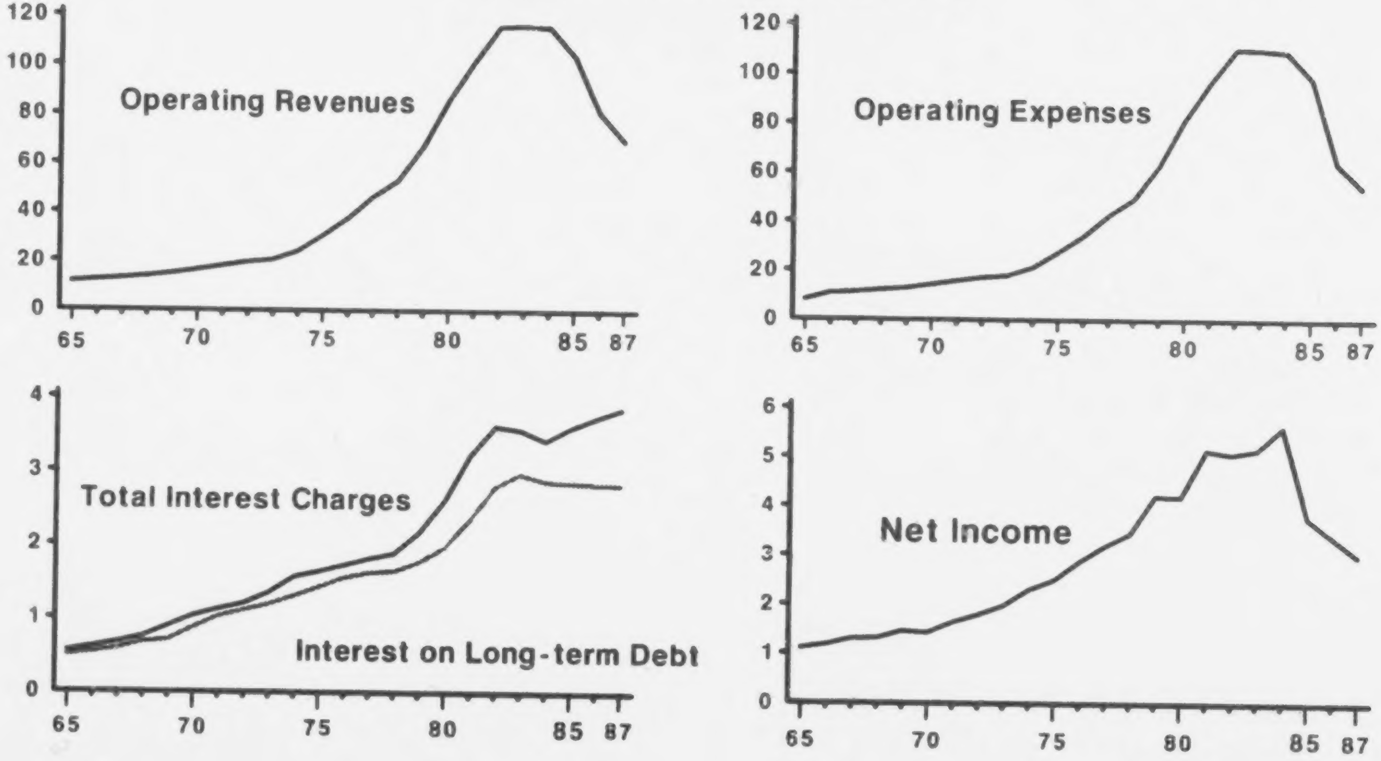
a. Oil includes kerosene.
b. Other includes LP gas, coal, wood and solar.
c. Data withheld because of a large variance.
d. Not applicable.
Source: U.S. Department of Energy, Energy Information Administration, *Residential Energy Consumption Survey: Housing Characteristics.*

SECTION 12
INCOME ACCOUNTS

	1987	% Change 87/86
Total Operating Revenues		
(Millions)		
Total Industry	$69,637	−14.0
Distribution	16,513	−10.0
Transmission	27,275	−19.5
Integrated	11,025	−10.7
Combination	14,824	− 9.6
Net Income		
(Millions)		
Total Industry	$ 3,007	−11.3
Distribution	713	+ 3.5
Transmission	1,015	−23.5
Integrated	651	+ 6.2
Combination	628	−17.4

CHART 12-1

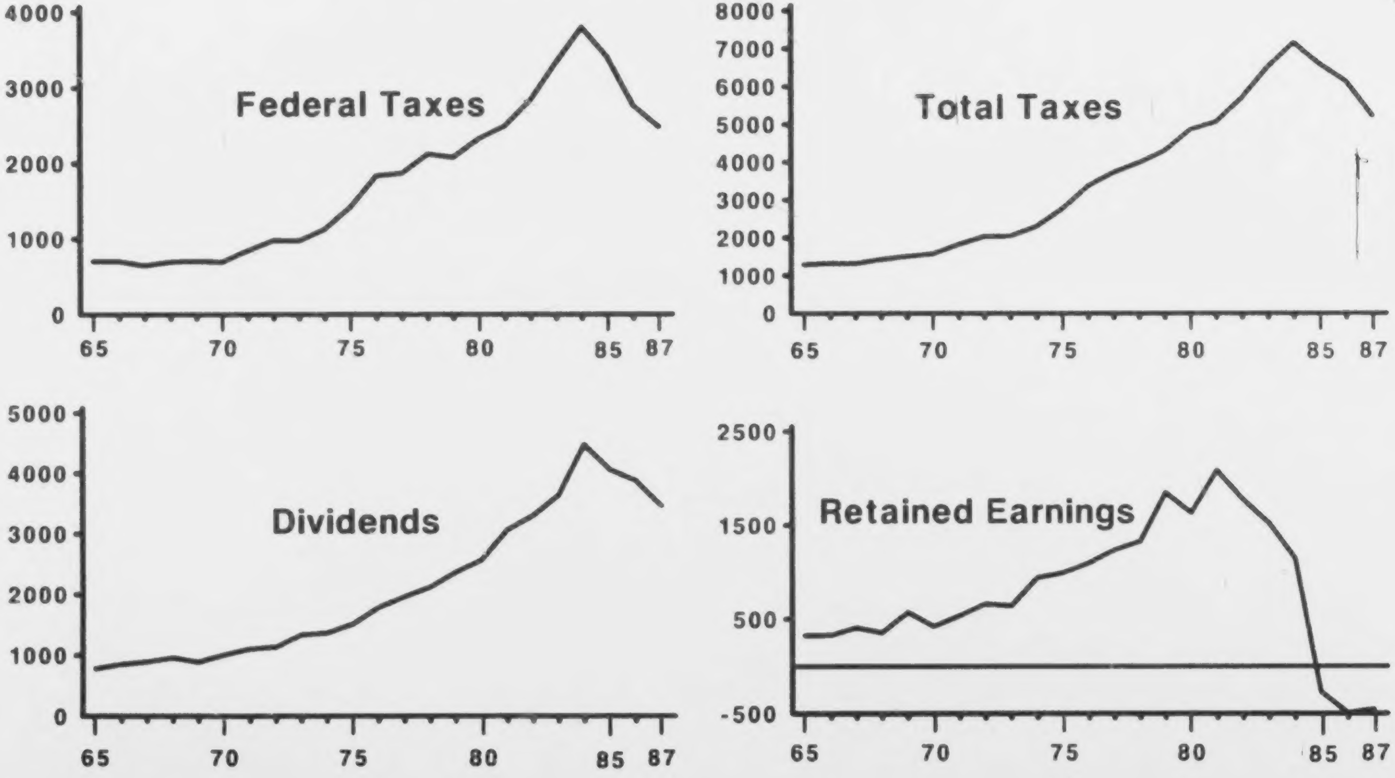
GAS UTILITY INDUSTRY COMPOSITE INCOME ACCOUNTS
(INVESTOR-OWNED)
BILLIONS OF DOLLARS



REFERENCE: TABLE 12-1

CHART 12-2

GAS UTILITY INDUSTRY DISPOSITION OF NET INCOME AND TAXES
(INVESTOR-OWNED)
MILLIONS OF DOLLARS



REFERENCE: TABLE 12-1

TABLE 12-1
COMPOSITE INCOME ACCOUNTS
INVESTOR-OWNED GAS UTILITY INDUSTRY
TOTAL INDUSTRY[a], 1965–1987

(Millions)

	1965	1970	1975	1980	1985	1986[R]	1987
Total Operating Revenues	$11,525	$16,380	$30,550	$85,918	$103,945	$ 80,978	$ 69,637
Operation Expenses	7,657	11,205	22,254	73,288	86,944	64,347	54,381
Maintenance Expenses	316	431	703	1,220	1,628	1,685	1,661
Total Operation and Maintenance Expenses	7,973	11,636	22,957	74,508	88,572	66,032	56,042
Depreciation, Retirements, Depletion, etc.	798	1,101	1,760	2,434	3,158	3.305	3,171
Federal Income Taxes[b]	633	605	965	1,369	2,282	1,760	1,493
Provision for Deferred Federal Income Taxes			465	1,949	2,206	2,613	2,772
Portion of Current Federal Income Taxes Provided For in Prior Years	45	34	(252)	(1,406)	(1,676)	(1,614)	(2,186)
Investment Tax Credit Adjustment	b	b	130	213	238	4	(12)
Other Federal Taxes	27	55	109	202	355	369	361
State Income Taxes	26	46	116	200	314	315	242
Other State and Local Taxes	561	829	1,230	2,320	2,871	2,686	2,556
Total Taxes	1,292	1,569	2,763	4,847	6,590	6.133	5,226
Total Operating Expenses	10.063	14,306	27,480	81,789	98,320	75,470	64,439
Operating Income	1,462	2,074	3,070	4.129	5,625	5,508	5,198
Other Operating Income	7	12	21	23	140	231	160
Allowance for Funds Used During Construction	34	73	130	319	265	204	138
Utility Operating Income	1,503	2.159	3,221	4.471	6,030	5,943	5,496
Other Income (Non-Operating) (Net)[c]	157	298	916[d]	2,458[d]	1,606[d]	1,142[d]	1,420[d]
Income Before Interest Charges	1,660	2,457	4,137[d]	6,929[d]	7,636[d]	7,085[d]	6,916[d]
Interest on Long-Term Debt	499	867	1,423	1,961	2,847	2,829	2,824
Amortization of Debt Disc. Exp. and Premium	5	9	12	15	25	70	86
Other Interest Expense (Net)	49	154	203	622	724	832	938
Total Interest Charges	553	1,030	1,638	2,598	3,596	3,731	3,848
Net Income Before Extraordinary Items	e	e	2,499[d]	4,331[d]	4,039[d]	3,354[d]	3,068[d]
Extraordinary Items, Less Taxes	c	c	3	(137)	(255)	36	(61)
Net Income	1,107	1,427	2,502[d]	4,194[d]	3,785[d]	3,390[d]	3,007[d]
Preferred Dividends	78	129	184	296	430	370	305
Common Dividends	703	877	1,325	2,268	3,630	3,512	3,159
Note:							
Number of Companies Reporting[f]	304	291	204	201	184	177	185
Op. Rev. of Companies Reporting (Millions)	$10,751	$15,776	$29,057	$79,896	$ 94,935	$ 72,816	$ 63,444

a. For combination companies, only gas operations are included.
b. "Investment Tax Credit Adjustment" included in "Federal Income Taxes" prior to 1971.
c. "Extraordinary Items" included in "Other Income (Non-Operating) (Net)" prior to 1971.
d. Not comparable with prior years due to a 1973 Federal Power Commission ruling requiring adoption of the equity method in reporting earnings of subsidiaries.
e. Not available.
f. Financial data of report companies expanded to represent total industry on the basis of operating revenues.
R – Revised.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-2
COMPOSITE INCOME ACCOUNTS
INVESTOR-OWNED GAS UTILITY INDUSTRY
DISTRIBUTION COMPANIES, 1981–1987

(Millions)

	1981	1982	1983	1984	1985	1986[R]	1987
Total Operating Revenues	$12,726	$14,653	$16,743	$17,366	$21,510	$18,352	$16,513
Operation Expenses	10,727	12,523	14,064	14,370	17,387	14,384	12,687
Maintenance Expenses	206	217	271	294	420	425	430
Total Operation and Maintenance Expenses	10,933	12,740	14,335	14,664	17,807	14,809	13,117
Depreciation, Retirements, Depletion, etc	292	314	372	397	571	625	629
Federal Income Taxes	106	123	176	388	345	429	433
Provision for Deferred Federal Income Taxes	112	144	214	139	-250	214	205
Portion of Current Federal Income Taxes Provided For in Prior Years	(34)	(69)	(70)	(120)	(68)	(97)	(166)
Investment Tax Credit Adjustment	41	36	35	40	71	4	(11)
Other Federal Taxes	46	52	62	70	97	97	101
State Income Taxes	32	33	44	47	65	63	54
Other State and Local Taxes	555	624	774	837	1,122	1,028	937
Total Taxes	858	943	1,235	1,401	1,882	1,738	1,553
Total Operating Expenses	12,083	13,997	15,942	16,462	20,260	17,172	15,299
Operating Income	643	656	801	904	1,250	1,180	1,214
Other Operating Income	2	2	2	3	4	2	2
Allowance for Funds Used During Construction	17	16	12	11	9	9	15
Utility Operating Income	662	674	815	918	1,263	1,191	1,231
Other Income (Non-Operating) (Net)	51	76	91	94	121	(64)	29
Income Before Interest Charges	713	750	906	1,012	1,384	1,127	1,260
Interest on Long-Term Debt	248	297	323	327	456	448	460
Amortization of Debt Disc. Exp. and Premium	2	2	3	4	5	7	8
Other Intererst Expense (Net)	104	80	60	54	93	88	88
Total Interest Charges	354	379	386	385	554	543	556
Net Income Before Extraordinary Items	359	371	520	627	829	584	704
Extraordinary Items, Less Taxes	2	2	a	a	2	105	9
Net Income	361	373	521	627	831	689	713
Preferred Dividends	22	22	31	31	44	39	30
Common Dividends	246	257	329	400	640	677	570
Note:							
Number of Companies Reporting	52	52	53	53	65	60	61
Op. Rev. of Companies Reporting (Millions)	$11,699	$13,407	$15,395	$15,659	$19,424	$16,508	$15,254

a. Less than $500,000.
R – Revised.
( ): Denotes negative.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-3
COMPOSITE INCOME ACCOUNTS
INVESTOR-OWNED GAS UTILITY INDUSTRY
TRANSMISSION COMPANIES, 1965–1987

(Millions)

	1965	1970	1975	1980	1985	1986	1987
Total Operating Revenues	$4,088	$5,928	$11,898	$41,604	$45,738	$33,887	$27,275
Operation Expenses	2,747	4,094	8,463	36,075	39,635	27,385	21,972
Maintenance Expenses	78	109	187	405	523	593	546
Total Operation and Maintenance Expenses	2,825	4,203	8,650	36,480	40,158	27,978	22,518
Depreciation, Retirements, Depletion, etc.	357	509	896	1,238	1,449	1,677	1,461
Federal Income Taxes[a]	212	200	646	846	1,103	869	200
Provision for Deferred Federal Income Taxes			246	1,421	1,399	1,596	2,056
Portion of Current Federal Income Taxes Provided For in Prior Years	13	(9)	(221)	(1,069)	(1,189)	(1,158)	(1,457)
Investment Tax Credit Adjustment	a	a	48	77	49	(9)	1
Other Federal Taxes	5	11	22	52	92	101	89
State Income Taxes	8	12	52	92	101	126	66
Other State and Local Taxes	117	162	221	572	425	407	425
Total Taxes	355	376	1,014	1,991	1,980	1,932	1,380
Total Operating Expenses	3,537	5,088	10,560	39,709	43,587	31,587	25,359
Operating Income	551	840	1,338	1,895	2,151	2,300	1,916
Other Operating Income	b	b	b	3	125	223	151
Allowance for Funds Used During Construction	18	24	38	126	44	36	33
Utility Operating Income	569	864	1,376	2,024	2,320	2,559	2,100
Other Income (Non-Operating) (Net)[c]	70	190	640[d]	1,755[d]	1,238[d]	892[d]	1,100[d]
Income Before Interest Charges	639	1,054	2,016[d]	3,779[d]	3,558[d]	3,451[d]	3,200[d]
Interest on Long-Term Debt	237	414	643	979	1,346	1,483	1,493
Amortization of Debt Disc. Exp. and Premium	4	7	7	8	9	54	59
Other Interest Expense (Net)	20	70	110	325	317	534	623
Total Intererst Charges	261	491	760	1,312	1,672	2,071	2,175
Net Income Before Extraordinary Items	e	e	1,256[d]	2,467[d]	1,886[d]	1,380[d]	1,025[d]
Extraordinary Items, Less Taxes	c	c	0	(141)	(129)	(53)	(10)
Net Income	378	563	1,256[d]	2,326[d]	1,757[d]	1,327[d]	1,015[d]
Preferred Dividends	38	79	79	142	164	182	152
Common Dividends	258	351	600	1,229	1,984	1,917	1,633
Note:							
Number of Companies Reporting	47	39	33	39	38	38	45
Op. Rev. of Companies Reporting (Millions)	$3,999	$5,729	$11,192	$37,971	$41,705	$30,644	$24,457

a. "Investment Tax Credit Adjustment" included in "Federal Income Taxes" prior to 1971.
b. Less than $500,000.
c. "Extraordinary Items" included in "Other Income (Non-Operating) (Net)" prior to 1971.
d. Not comparable with prior years due to 1973 Federal Power Commission ruling requiring adoption of the equity method in reporting earings of subsidiaries.
e. Not available.
( ): Denotes negative.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-4
COMPOSITE INCOME ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY INTEGRATED COMPANIES, 1981-1987

(Millions)

	1981	1982	1983	1984	1985	1986R	1987
Total Operating Revenues	$23,612	$27,481	$27,125	$25,599	$17,396	$12,348	$11,025
Operation Expenses	20,076	23,399	22,806	21,043	14,281	9,765	8,437
Maintenance Expenses	417	455	422	432	306	273	278
Total Operation and Maintenance Expenses	20.493	23,854	23,228	21,475	14,587	10,038	8,715
Depreciation, Retirements, Depletion, etc	617	671	704	682	571	373	436
Federal Income Taxes	220	160	506	714	441	171	479
Provision for Deferred Federal Income Taxes	350	538	382	156	238	343	163
Portion of Current Federal Income Taxes Provided For in Prior Years	(155)	(276)	(258)	(171)	(204)	(70)	(277)
Investment Tax Credit Adjustment	78	125	84	78	57	(5)	(2)
Other Federal Taxes	86	103	100	105	79	74	72
State Income Taxes	60	49	95	106	69	54	46
Other State and Local Taxes	781	930	867	905	511	465	444
Total Taxes	1,420	1,629	1,776	1,893	1,191	1,032	925
Total Operating Expenses	22.530	26,154	25,708	24,050	16,349	11,443	10,076
Operating Income	1,082	1,327	1,417	1,549	1,047	905	949
Other Operating Income	22	21	18	13	11	6	7
Allowance for Funds Used During Construction	18	21	10	9	7	6	11
Utility Operating Income	1,122	1,369	1,445	1,571	1,065	917	967
Other Income (Non-Operating) (Net)	771	606	457	419	162	206	236
Income Before Interest Charges	1,893	1,975	1,902	1,990	1,227	1,123	1,203
Interest on Long-Term Debt	501	606	635	634	501	355	381
Amortization of Debt Disc. Exp. and Premium	3	4	4	5	6	3	11
Other Interest Expense (Net)	239	231	140	119	274	166	184
Total Interest Charges	743	841	779	758	781	524	576
Net Income Before Extraordinary Items	1,150	1,134	1,123	1,232	446	599	627
Extraordinary Items, Less Taxes	(9)	a	a	(30)	25	14	24
Net Income	1,141	1,134	1,123	1,202	471	613	651
Preferred Dividends	49	58	78	127	99	38	37
Common Dividends	618	712	774	846	575	458	470
Note:							
Number of Companies Reporting	48	46	43	42	26	25	27
Op. Rev. of Companies Reporting (Millions)	$22,360	$25,015	$24,309	$22,394	$14,743	$9,404	$9,072

a. Less than $500,000.
R–Revised.
( ): Denotes negative.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-5
COMPOSITE INCOME ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY COMBINATION COMPANIES, 1981-1987

(Millions)

	1981	1982	1983	1984	1985	1986	1987
Gas Operations							
Total Operating Revenues	$15,067	$17,692	$18,651	$19,207	$19,301	$16,391	$14,824
Operation Expenses	12,636	14,778	15,567	15,692	15,641	12,813	11,285
Maintenance Expenses	319	339	346	354	379	394	407
Total Operation and Maintenance Expenses	12,955	15,117	15,913	16,046	16,020	13,207	11,692
Depreciation, Retirements, Depletion, etc.	398	443	480	522	567	630	645
Federal Income Taxes	126	145	116	513	393	291	381
Provision for Deferred Federal Income Taxes	218	254	416	250	319	460	348
Portion of Current Federal Income Taxes Provided For in Prior Years	(159)	(97)	(220)	(309)	(215)	(289)	(286)
Investment Tax Credit Adjustment	38	72	76	95	61	14	b
Other Federal Taxes	62	69	74	82	87	97	99
State Income Taxes	20	55	63	82	79	72	76
Other State and Local Taxes	650	729	790	786	813	786	750
Total Taxes	955	1,227	1,315	1,499	1,537	1,431	1,368
Total Operating Expenses	14,308	16,787	17,708	18,067	18,124	15,268	13,705
Operating Income[a]	759	905	943	1,140	1,177	1,123	1,119
Total Operations							
Total Operating Revenues	$51,085	$56,541	$60,883	$62,035	$63,647	$58,917	$56,601
Operation Expenses	33,318	35,305	36,987	36,616	36,773	31,748	29,746
Maintenance Expenses	2,561	2,939	3,195	3,852	3,[illegible]89	3,438	3,662
Total Operation and Maintenance Expenses	35,879	38,244	40,092	39,916	40,362	35,186	33,408
Depreciation, Retirements, Depletion, etc.	2,867	3,299	3,606	3,852	4,210	4,334	4,630
Federal Income Taxes	811	1,544	1,324	1,864	1,972	2,475	2,443
Provision for Deferred Federal Income Taxes	1,534	1,557	2,431	2,502	2,477	3,180	3,010
Portion of Current Federal Income Taxes Provided For in Prior Years	(915)	(1,080)	(981)	(1,129)	(884)	(1,136)	(1,625)
Investment Tax Credit Adjustment	478	900	847	925	790	40	24
Other Federal Taxes	296	331	360	380	401	410	448
State Income Taxes	199	365	432	538	466	489	424
Other State and Local Taxes	3,266	3,581	3,998	4,014	4,213	4,231	4,240
Total Taxes	5,669	7,198	8,411	9,095	9,435	9,689	8,964
Total Operating Expenses	44,415	48,741	52,109	52,863	54,007	49,208	47,002
Operating Income	6,670	7,800	8,774	9,172	9,640	9,708	9,599
Other Operating Income	1	2	1	1	1	31	13
Allowance for Funds Used During Construction	1,833	2,247	2,975	2,568	2,578	1,937	1,119
Utility Operating Income	8,504	10,049	11,750	11,741	12,219	11,676	10,731
Other Income (Non-Operating) (Net)	605	625	478	745	968	1,158	406
Income Before Interest Charges	9,109	10,674	12,228	12,486	13,187	12,834	11,137
Interest on Long-Term Debt	3,544	4,052	4,615	4,718	5,155	4,971	4,718
Amortization of Debt Disc. Exp. and Premium	21	28	35	21	53	62	78
Other Interest Expense (Net)	620	567	410	383	302	322	372
Total Interest Charges	4,185	4,647	5,060	5,122	5,510	5,355	5,168
Net Income Before Extraordinary Items	4,924	6,027	7,168	7,364	7,677	7,479	5,969
Extraordinary Items, Less Taxes	1	41	9	15	749	(206)	(1,080)
Net Income	4,925	6,068	7,177	7,379	6,928	7,273	4,889
Preferred Dividends	891	986	1,073	1,022	1,006	914	779
Common Dividends	2,957	3,526	4,188	4,045	4,388	4,425	4,561
Note:							
Number of Companies Reporting	60	59	57	54	55	54	52
Total Op. Revenues of Companies Reporting (Millions)	$50,989	$55,901	$60,231	$60,980	$62,862	$58,444	$55,977
Gas Revenues of Companies Reporting (Millions)	$15,039	$17,492	$18,479	$18,880	$19,063	$16,260	$14,661

a. Includes "Other Operating Income" which was less than $500,000 in each year.
b. Less than $500,000.
( ): Denotes negative.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-6
INVESTOR-OWNED GAS UTILITY INDUSTRY
GAS OPERATION AND MAINTENANCE EXPENSES
BY TYPE OF COMPANY, 1986-1987

(Millions)

Total Industry Type of Expense	1986^R		1987	
	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$52,358	$ 0	$41,510	$ 0
Other Production and Purch. Exp. and Adjustments	720	156	1,658	126
Production and Purchases, Total	53,078	156	43,168	126
Storage	593	91	573	88
Transmission	2,961	481	2,738	464
Distribution	1,413	879	1,504	903
Customer Accounts	1,507	a	1,527	0
Sales	177	a	187	a
Administrative and General	4,202	78	4,332	80
Customer Service	416	0	352	0
Total	64,347	1,685	54,381	1,661
Distribution Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$11,724	$ 0	$10,010	$ 0
Other Production and Purch. Exp. and Adjustments	165	16	105	11
Production and Purchases, Total	11,889	16	10,115	11
Storage	40	13	40	15
Transmission	18	5	17	4
Distribution	568	366	607	372
Customer Accounts	648	a	653	0
Sales	96	a	95	a
Administrative and General	1,034	25	1,061	28
Customer Service	91	0	99	0
Total	14,384	425	12,687	430
Transmission Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$22,318	$ 0	$16,164	$ 0
Other Production and Purch. Exp. and Adjustments	339	113	1,316	85
Production and Purchases, Total	22,657	113	17,480	85
Storage	407	42	385	40
Transmission	2,662	426	2,417	408
Distribution	a	a	27	2
Customer Accounts	14	0	19	0
Sales	27	0	28	0
Administrative and General	1,609	12	1,607	11
Customer Service	9	0	9	0
Total	27,385	593	21,972	546
Integrated Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$ 7,927	$ 0	$ 6,469	$ 0
Other Production and Purch. Exp. and Adjustments	32	10	97	14
Production and Purchases, Total	7,959	10	6,566	14
Storage	73	22	78	20
Transmission	173	26	175	26
Distribution	339	199	353	202
Customer Accounts	362	0	377	0
Sales	35	0	39	0
Administrative and General	680	16	754	16
Customer Service	144	0	95	0
Total	9,765	273	8,437	278
Combination Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$10,389	$ 0	$ 8,867	$ 0
Other Production and Purch. Exp. and Adjustments	184	17	140	16
Production and Purchases, Total	10,573	17	9,007	16
Storage	73	14	70	13
Transmission	108	24	129	26
Distribution	506	314	517	327
Customer Accounts	483	0	478	0
Sales	19	0	25	0
Administrative and General	879	25	910	25
Customer Service	172	0	149	0
Total	12,813	394	11,285	407

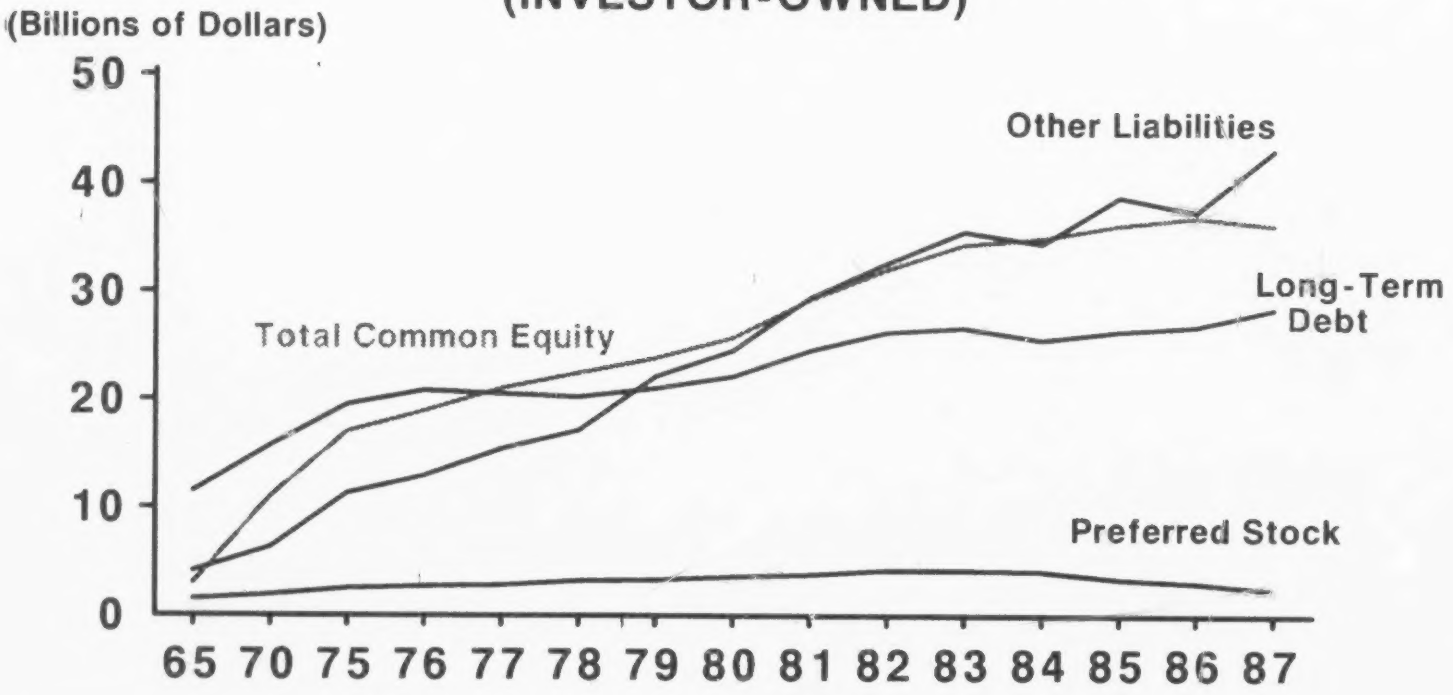
a. Less than $500,000.
R–Revised.
Note: See note previous page.

SECTION 13
BALANCE SHEETS

	1987	% Change 87/86
Gas Utility Plant		
(Millions)		
Total Industry	$93,568	+ 4.1
Distribution	19,320	+ 7.9
Transmission	42,810	+ 0.3
Integrated	13,839	+13.1
Combination	17,599	+ 3.1
Total Common Equity		
(Millions)		
Total Industry	$36,213	− 1.7
Distribution	5,895	+ 8.8
Transmission	19,564	− 7.6
Integrated	5,413	+12.1
Combination	5,341	− 1.5

CHART 13-1

GAS UTILITY INDUSTRY INVESTMENT (INVESTOR-OWNED)



REFERENCE: TABLE 13-1

BALANCE SHEETS

TABLE 13-1
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY TOTAL INDUSTRY, 1965–1987

(Millions)

	1965	1970	1975	1980	1985	1986[R]	1987
ASSETS							
Total Gas Utility Plant	$28,205	$38,541	$49,384	$67,071	$86,547	$89,887	$93,568
Less Accum. Prov. for Depr. and Amort.	7,205	10,696	16,779	26,162	36,377	36,776	40,996
Net Gas Utility Plant (Total)	21,000	27,845	32,605	40,909	50,170	53,111	52,572
Gas Stored Underground (Non-Current)[a]	0	0	0	0	1,574	1,719	1,725
Investment and Fund Accounts	1,885	3,024	9,198[b]	15,530[b]	23,871[b]	21,850[b]	26,039[b]
Current and Accrued Assets	2,545	3,674	7,543	17,243	24,771	21,477	21,064
Deferred Debits[c]	210	386	940	2,169	4,092	5,851	8,625
Total Assets	25,640	34,929	50,286[b]	75,851[b]	104,478[b]	104,008[b]	110,025[b]
LIABILITIES							
Common Stock	4,360	4,727	5,803	6,968	7,739	7,928	7,889
Retained Earnings	2,715	4,230	7,911[b]	13,122[b]	18,893[b]	16,414[b]	16,192[b]
Other Paid-in Capital[d]	1,390	2,063	3,245	5,597	9,450	12,507	12,132
Total Common Equity	8,465	11,020	16,959[b]	25,687[b]	36,082[b]	36,849[b]	36,213[b]
Preferred Stock	1,540	1,945	2,541	3,628	3,435	3,053	2,424
Total Capital Stock	10,005	12,965	19,500[b]	29,315[b]	39,517[b]	39,902[b]	38,637[b]
Bonds	7,525	9,248	10,493	9,574	9,378	9,859	10,663
Debentures	2,560	4,274	5,174	5,819	7,739	7,016	8,054
Other Long-Term Debt	1,430	2,159	3,877	6,674	9,165	9,883	9,655
Total Long-Term Debt	11,515	15,681	19,544	22,067	26,282	26,758	28,372
Total Capitalization	21,520	28,646	39,044[b]	51,382[b]	65,799[b]	66,660[b]	67,009[b]
Current and Accrued Liabilities	3,035	4,832	8,158	18,119	26,125	23,855	26,744
Deferred Credits	215	370	752	1,683	3,779	3,985	4,638
Non-Current Liabilities[e]	55	48	194	428	879	1,007	1,649
Contributions in Aid of Construction	155	245	86	90	127	138	123
Accumulated Deferred Income Taxes[f]	660	788	2,052	4,149	7,769	8,363	9,862
Total Liabilities	25,640	34,929	50,286[b]	75,851[b]	104,478[b]	104,008[b]	110,025[b]

a. First year this category is broken out is 1985.

b. Not comparable with 1970 and prior years due to a 1973 Federal Power Commission ruling requiring adoption of the equity method in reporting earnings of subsidiaries.

c. Includes "Capital Stock Discount and Expense" and "Reacquired Securities."

d. Includes accounts formerly detailed in "Premiums, Assessments, etc." and "Capital Surplus."

e. Formerly called "Operating Reserves."

f. Includes "Reserves for Deferred Income Taxes."

R–Revised.

Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-2
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY DISTRIBUTION COMPANIES, 1981-1987

(Millions)

	1981	1982	1983	1984	1985	1986[R]	1987
ASSETS							
Total Gas Utility Plant	$9,188	$9,755	$11,042	$11,980	$17,383	$17,911	$19,320
Less Accum. Prov. for Depr. and Amort.	2,799	3,067	3,558	3,971	5,631	5,833	6,277
Net Gas Utility Plant (Total)	6,389	6,688	7,484	8,009	11,752	12,078	13,043
Gas Stored Underground (Non-Current)[a]	0	0	0	0	124	145	127
Investment and Fund Accounts	454	523	564	659	1,136	758	909
Current and Accrued Assets	2,877	3,043	3,890	3,317	4,864	4,054	3,845
Deferred Debits	105	192	214	180	334	386	479
Total Assets	9,825	10,446	12,152	12,165	18,210	17,421	18,403
LIABILITIES							
Common Stock	837	925	974	805	1,205	1,189	1,326
Retained Earnings	1,349	1,425	1,669	1,921	2,917	2,467	2,462
Other Paid-in Capital	554	623	860	1,076	1,502	1,762	2,107
Total Common Equity	2,740	2,973	3,503	3,802	5,624	5,418	5,895
Preferred Stock	257	268	338	336	441	382	391
Total Capital Stock	2,997	3,241	3,841	4,138	6,065	5,800	6,286
Bonds	1,686	1,666	1,928	1,950	2,756	2,963	2,950
Debentures	126	123	309	345	537	700	914
Other Long-Term Debt	764	979	795	839	1,171	1,189	1,198
Total Long-Term Debt	2,576	2,768	3,032	3,134	4,464	4,852	5,062
Total Capitalization	5,573	6,009	6,873	7,272	10,529	10,652	11,348
Current and Accrued Liabilities	3,168	3,201	3,767	3,294	5,054	4,186	4,314
Deferred Credits	407	470	570	642	969	923	977
Non-Current Liabilities[b]	19	18	22	28	54	43	50
Contributions in Aid of Construction	57	60	62	67	116	123	117
Accumulated Deferred Income Taxes[c]	601	688	858	862	1,488	1,494	1,597
Total Liabilities	9,825	10,446	12,152	12,165	18,210	17,421	18,403

a. First year this category is broken out is 1985.

b. Formerly called "Operating Reserves."

c. Includes "Reserves for Deferred Income Taxes."

R – Revised.

Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

BALANCE SHEETS

TABLE 13-3
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY TRANSMISSION COMPANIES, 1965-1987

(Millions)

	1965	1970	1975	1980	1985	1986	1987
ASSETS							
Total Gas Utility Plant	$11,505	$16,363	$20,351	$30,334	$39,076	$42,668	$42,810
Less Accum. Prov. for Depr. and Amort.	3,375	5,311	8,636	14,361	21,126	22,289	25,132
Net Gas Utility Plant (Total)	8,130	11,052	11,714	15,973	17,950	20,379	17,678
Gas Stored Underground (Non-Current)[a]	0	0	0	0	868	1,055	958
Investment and Fund Accounts	1,060	1,889	6,791[b]	11,998[b]	14,914[b]	18,023[b]	21,295[b]
Current and Accrued Assets	950	1,384	3,459	8,432	14,494	12,526	12,288
Deferred Debits[c]	100	192	516	1,371	2,311	3,979	6,305
Total Assets	10,240	14,517	22,480[b]	37,774[b]	50,537[b]	55,962[b]	58,524[b]
LIABILITIES							
Common Stock	1,225	1,477	1,984	2,610	2,694	3,194	2,233
Retained Earnings	815	1,430	4,010[b]	7,984[b]	11,102[b]	9,799[b]	9,339[b]
Other Paid-in Capital[d]	770	1,233	1,891	3,414	5,008	8,185	7,992
Total Common Equity	2,810	4,140	7,885[b]	14,008[b]	18,804[b]	21,178[b]	19,564[b]
Preferred Stock	715	1,019	1,012	1,734	1,361	1,150	494
Total Capital Stock	3,525	5,159	8,897[b]	15,742[b]	20,165[b]	22,328[b]	20,058[b]
Bonds	3,060	3,458	3,125	2,398	900	1,234	1,917
Debentures	1,545	2,569	3,124	3,732	5,529	4,805	5,515
Other Long-Term Debt	420	841	2,167	4,114	5,117	5,945	5,529
Total Long-Term Debt	5,025	6,868	8,415	10,244	11,546	11,984	12,961
Total Capitalization	8,550	12,027	17,312[b]	25,986[b]	31,711[b]	34,312[b]	33,019[b]
Current and Accrued Liabilities	1,200	1,974	3,802	9,067	13,028	14,505	16,603
Deferred Credits	65	147	295	495	998	1,611	2,053
Non-Current Liabilities[e]	15	14	113	174	580	810	1,424
Contributions in Aid of Construction	20	14	0	0	5	7	1
Accumulated Deferred Income Taxes[f]	390	341	959	2,052	4,215	4,717	5,424
Total Liabilities	10,240	14,517	22,480[b]	37,774[b]	50,537[b]	55,962[b]	58,524[b]

a. First year this category is broken out is 1985.

b. Not comparable with 1970 and prior years due to a 1973 Federal Power Commission ruling requiring adoption of the equity method in reporting earnings of subsidiaries.

c. Includes "Capital Stock Discount and Expense."

d. Includes accounts formerly detailed in "Premiums, Assessments, etc." and "Capital Surplus."

e. Formerly called "Operating Reserves."

f. Includes "Reserves for Deferred Income Taxes."

Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-4
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY INTEGRATED COMPANIES, 1981-1987

(Millions)

	1981	1982	1983	1984	1985	1986R	1987
ASSETS							
Total Gas Utility Plant	$17,776	$19,190	$19,284	$19,033	$14,203	$12,236	$13,839
Less Accum Prov for Depr and Amort	6,102	6,631	6,902	6,875	5,743	4,305	4,914
Net Gas Utility Plant (Total)	11,674	12,559	12,382	12,158	8,460	7,931	8,925
Gas Stored Underground (Non-Current)[a]	0	0	0	0	442	371	446
Investment and Fund Accounts	3,702	4,833	5,192	6,057	7,354	2,520	3,264
Current and Accrued Assets	5,127	5,975	6,371	5,315	3,726	3,180	3,329
Deferred Debits	517	773	628	447	538	390	604
Total Assets	21,020	24,140	24,573	23,977	20,520	14,392	16,568
LIABILITIES							
Common Stock	2,293	2,232	2,351	2,174	1,808	1,497	2,230
Retained Earnings	3,420	4,107	4,056	4,252	3,058	2,110	2,511
Other Paid-in Capital	1,120	1,255	1,780	1,903	1,766	1,223	672
Total Common Equity	6,833	7,594	8,187	8,329	6,632	4,830	5,413
Preferred Stock	606	722	690	770	439	398	511
Total Capital Stock	7,439	8,316	8,877	9,099	7,071	5,228	5,924
Bonds	2,247	2,331	2,386	2,307	1,352	1,179	1,219
Debentures	2,194	2,448	2,526	2,546	1,537	1,299	1,437
Other Long-Term Debt	1,429	1,810	1,611	1,538	1,940	1,715	1,825
Total Long-Term Debt	5,870	6,589	6,523	6,391	4,829	4,193	4,481
Total Capitalization	13,309	14,905	15,400	15,490	11,900	9,421	10,405
Current and Accrued Liabilities	5,627	6,625	6,516	5,731	6,401	3,424	4,137
Deferred Credits	561	785	726	938	982	596	641
Non-Current Liabilities[b]	104	283	83	83	133	22	24
Contributions in Aid of Construction	37	43	51	48	c	c	c
Accumulated Deferred Income Taxes[d]	1,382	1,499	1,797	1,687	1,104	929	1,361
Total Liabilities	21,020	24,140	24,573	23,977	20,520	14,392	16,568

a. First year this category is broken out is 1985.
b. Formerly called "Operating Reserves."
c. Less than $500,000.
d. Includes "Reserves for Deferred Income Taxes."
R–Revised.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-5
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY COMBINATION COMPANIES, 1981-1987

(Millions)

	1981	1982	1983	1984	1985	1986R	1987
ASSETS							
Electric	$103,460	$114,620	$130,259	$127,337	$107,117	$110,397	$123,609
Gas	12,846	13,760	14,385	14,837	15,552	16,723	17,237
Other	3,950	4,366	4,759	5,102	5,338	6,162	7,415
Total Utility Plant	120,256	132,746	149,403	147,276	128,007	133,282	148,261
Construction Work in Progress[a]	0	0	0	0	32,611	26,248	17,415
Less Accum. Prov. for Depr. and Amort.	27,569	30,496	33,971	35,225	38,898	40,329	43,564
Net Utility Plant	92,687	102,250	115,432	112,051	121,720	119,201	122,112
Gas Stored Underground (Non-Current)[b]	0	0	0	0	140	148	194
Investment and Fund Accounts	2,647	3,224	3,894	4,098	4,686	5,093	5,327
Current and Accrued Assets	12,562	13,556	14,615	15,923	16,921	15,919	14,937
Deferred Debits	2,597	3,284	4,474	9,335	9,124	10,161	11,527
Total Assets	110,493	122,314	138,415	141,407	152,591	150,522	154,097
LIABILITIES							
Common Stock	13,997	15,974	17,899	18,364	20,382	18,995	19,581
Retained Earnings	11,880	13,382	15,493	16,754	18,218	18,895	17,521
Other Paid-in Capital	8,686	10,047	11,777	10,887	11,780	12,396	12,692
Total Common Equity	34,483	39,403	45,169	46,005	50,380	50,286	49,794
Preferred Stock	11,244	11,903	13,234	12,258	11,980	10,413	9,585
Total Capital Stock	45,727	51,306	58,403	58,263	62,360	60,699	59,379
Bonds	35,632	38,912	42,284	41,905	43,834	41,573	42,663
Debentures	787	805	785	1,103	1,361	1,962	1,754
Other Long-Term Debt	4,889	5,947	8,010	8,317	9,394	9,587	10,278
Total Long-Term Debt	41,308	45,664	51,079	51,325	54,589	53,122	54,695
Total Capitalization	87,035	96,970	109,482	109,588	116,949	113,821	114,074
Current and Accrued Liabilities	14,338	14,172	14,929	15,285	16,477	16,139	15,755
Deferred Credits	4,126	5,427	6,237	7,091	8,326	7,925	9,012
Non-Current Liabilities[c]	67	108	113	1,644	1,123	1,222	1,412
Contribution in Aid of Construction	50	52	57	61	64	76	50
Accumulated Deferred Income Taxes[d]	4,877	5,585	7,597	7,738	9,652	11,339	13,794
Total Liabilities	110,493	122,314	138,415	141,407	152,591	150,522	154,097

a. First year this category is broken out is 1985. Formerly included under the corresponding plant category.
b. First year this category is broken out is 1985.
c. Formerly called "Operating Reserves."
d. Includes "Reserves for Deferred Income Taxes."
R-Revised
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-6
TOTAL GAS UTILITY INDUSTRY PLANT BY TYPE OF COMPANY AND BY PLANT FUNCTION, 1965–1987

(Millions)

	1965	1970	1975	1980	1985	1986[R]	1987
Total Industry							
Total Gas Utility Plant	**$29,175**	**$39,914**	**$51,004**	**$69,275**	**$88,717**	**$92,159**	**$95,980**
Production	3,180	3,657	4,776	8,199	10,511	8,534	8,910
Underground Storage	1,200	1,816	2,697	4,529	4,305	4,545	4,489
Other Storage	a	a	700	672	717	733	666
LNG	b	b	b	284	262	269	286
Transmission	12,435	17,188	20,530	25,418	33,969	35,431	36,535
Distribution	10,660	15,056	19,151	24,923	33,397	36,115	38,570
General and Intangible[c]	1,090	1,518	2,226	3,470	4,438	5,312	4,998
Construction Work in Progress	610	679	924	1,780	1,118	1,220	1,526
Total Investor-Owned Industry							
Total Gas Utility Plant	**$28,205**	**$38,541**	**$49,384**	**$67,071**	**$86,547**	**$89,887**	**$93,568**
Production	3,055	3,529	4,687	8,019	10,347	8,277	8,656
Underground Storage	1,190	1,770	2,639	4,451	4,286	4,524	4,467
Other Storage	a	a	648	632	617	634	565
LNG	b	b	b	273	241	248	265
Transmission	12,425	17,170	20,307	25,298	33,930	35,392	36,489
Distribution	9,935	13,989	18,080	23,343	31,906	34,538	36,909
General and Intangible[c]	1,020	1,451	2,125	3,334	4,155	5,112	4,779
Construction Work in Progress	580	632	896	1,721	1,065	1,162	1,438
Distribution Companies							
Total Gas Utility Plant	b	b	**$ 8,547**	**$10,990**	**$17,383**	**$17,911**	**$19,320**
Production	b	b	387	539	656	509	629
Underground Storage	b	b	460	627	572	566	556
Other Storage	b	b	172	140	200	198	183
LNG	b	b	c	91	151	156	162
Transmission	b	b	425	338	581	518	536
Distribution	b	b	6,452	8,569	13,720	14,377	15,454
General and Intangible[c]	b	b	479	599	1,308	1,389	1,526
Construction Work in Progress	b	b	173	87	195	198	274
Transmission Companies							
Total Gas Utility Plant	**$11,505**	**$16,363**	**$20,351**	**$30,334**	**$39,076**	**$42,668**	**$42,810**
Production	1,570	1,842	2,650	5,098	7,204	6,465	6,301
Underground Storage	325	668	1,299	2,340	2,325	2,606	2,571
Other Storage	a	a	113	175	143	203	156
LNG	b	b	b	160	41	42	37
Transmission	9,040	13,238	15,322	20,194	27,400	30,564	31,464
Distribution	5	2	5	7	6	0	5
General and Intangible[c]	260	330	587	1,204	1,583	2,340	1,704
Construction Work in Progress	305	283	375	1,156	374	448	572
Integrated Companies							
Total Gas Utility Plant	b	b	**$10,960**	**$13,756**	**$14,203**	**$12,236**	**$13,839**
Production	b	b	1,240	1,914	1,937	752	1,180
Underground Storage	b	b	531	961	916	842	870
Other Storage	b	b	62	103	85	51	49
LNG	b	b	b	14	5	6	6
Transmission	b	b	3,418	3,308	4,026	2,304	2,824
Distribution	b	b	4,809	6,191	6,338	7,382	7,818
General and Intangible[c]	b	b	748	1,029	733	733	862
Construction Work in Progress	b	b	151	236	163	166	230
Combination Companies							
Total Gas Utility Plant	b	b	**$ 9,526**	**$11,991**	**$15,885**	**$17,072**	**$17,599**
Production	b	b	410	468	550	551	546
Underground Storage	b	b	348	523	473	510	470
Other Storage	b	b	301	214	189	182	177
LNG	b	b	b	8	44	44	60
Transmission	b	b	1,144	1,458	1,923	2,006	1,665
Distribution	b	b	6,816	8,576	11,842	12,779	13,632
General and Intangible[c]	b	b	310	502	531	650	687
Construction Work in Progress	b	b	197	242	333	350	362

a. Included in "Production."
b. Not available.
c. Includes plant acquisition adjustments and plant adjustments.
R–Revised
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

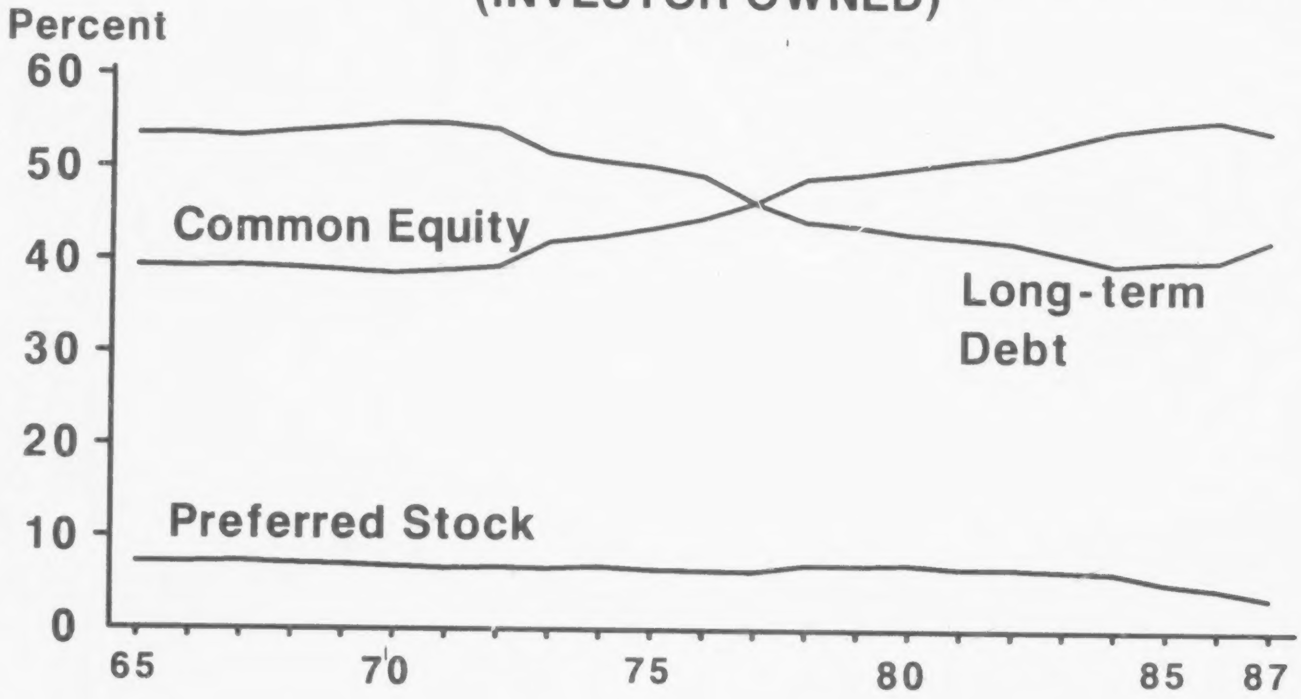
SECTION 14
ANALYTICAL RATIOS

	1987	% Change 87/86
Capitalization Represented by (%)		
Long-term Debt	42.3	+ 5.5
Preferred Stock	3.6	−21.0
Common Equity	54.1	− 2.2

The analytical ratios in this section have been calculated on a consistent basis for all years. These ratios are considered to be an acceptable set of indicators which provide trends on the condition of the investor-owned gas utility industry. Please contact the statistics department at A.G.A. for details of the formulas used to calculate these analytical ratios.

CHART 14-1

GAS UTILITY INDUSTRY TOTAL CAPITALIZATION (INVESTOR OWNED)



REFERENCE: TABLE 14-1

ANALYTICAL RATIOS

TABLE 14-1
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY TOTAL INDUSTRY, 1965-1987

	1965	1970	1975	1980	1985	1986[R]	1987
Earnings							
Utility Operating Income as % of Total Plant	5.3	5.6	6.5	6.7	7.0	6.6	5.9
Utility Operating Income as % of Net Plant	7.2	7.8	9.9	10.9	12.0	11.2	10.5
Operating Revenue as % of Total Plant	40.9	42.5	61.9	128.1	120.1	90.1	74.4
Common Dividend Payout Ratio	68.3	67.6	57.2[a]	58.2[a]	108.2[a]	116.3[a]	116.9[a]
Return on Common Equity	12.2	11.8	13.7[a]	15.2[a]	9.3[a]	8.2[a]	7.5[a]
Return on Average Common Equity	12.5	12.2	14.3	15.8	9.5	8.3	7.4
Return on Net Plant	4.9	4.7	7.1	9.5	6.7	5.7	5.1
Pretax Coverage of:							
Total Interest Expense[b]	4.2	3.0	3.3	3.5	3.0	2.6	2.3
Long-Term Debt Interest Expense[b]	4.7	3.6	3.8	4.6	3.8	3.5	3.2
Allowance for Funds Used During Construction as % of Net Income	3.1	5.1	5.2	7.6	7.0	6.0	4.6
Expenses							
Operating Expenses as % of Operating Revenue	87.3	87.3	90.0	95.2	94.6	93.2	92.5
Maintenance Expenses as % of Total Plant	1.1	1.1	1.4	1.8	1.9	1.9	1.8
Depreciation Expenses as % of Total Plant	2.8	2.9	3.6	3.6	3.7	3.7	3.4
Depreciation Expenses as % of Depreciable Plant	c	c	3.6	4.1	3.7	3.8	3.5
Total Taxes as % of Total Plant	4.6	4.1	5.6	7.2	7.6	6.8	5.6
Total Taxes as % of Net Plant	6.2	5.6	8.5	11.8	13.1	11.5	9.9
Total Taxes as % of Net Income plus Total Taxes	52.4	52.5	53.9[a]	53.6[a]	63.5[a]	64.4[a]	63.5[a]
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[d]	36.4	29.8	30.4[a]	27.4[a]	40.0[a]	34.3[a]	33.0[a]
Plant							
Total Plant as % of Total Operating Revenue	244.7	235.3	161.6	78.1	83.3	111.0	134.4
Net Plant as % of Total Operating Revenue	182.2	170.0	106.7	47.6	48.3	65.6	75.5
Depreciation Reserve as % of Total Plant	25.5	27.8	34.0	39.0	42.0	40.9	43.8
Depreciation Reserve as % of Depreciable Plant	c	c	35.8	44.0	43.1	42.4	44.9
Total Plant per Employee ($000)	137.1	182.1	251.6	328.1	423.2	444.9	473.9
Capitalization							
Long-term Debt as % of Net Plant	54.8	56.3	59.4	53.9	52.4	50.4	54.0
% Total Capitalization Represented by:							
a. Long-term Debt	53.5	54.7	50.1	42.9	40.0	40.1	42.3
b. Preferred Stock	7.2	6.8	6.5	7.1	5.2	4.6	3.6
c. Common Equity	39.3	38.5	43.4	50.0	54.8	55.3	54.1
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	c	c	53.8	55.3	71.8	63.5	62.4
b. Equity Issues	c	c	11.9	11.2	7.9	4.7	5.8
c. Debt Issues	c	c	34.3	33.5	20.3	31.8	31.8

a. Not comparable with 1970 and prior years due to a 1973 Federal Power Commission ruling requiring adoption of the equity method in reporting earnings of subsidiaries.

b. Reflects pre-federal income tax coverage.

c. Not available.

d. Includes "Investment Tax Credit Adjustment."

R–Revised.

TABLE 14-2
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY DISTRIBUTION COMPANIES, 1981-1987

	1981	1982	1983	1984	1985	1986[R]	1987
Earnings							
Utility Operating Income as % of Total Plant	7.2	6.9	7.4	7.7	7.3	6.6	6.4
Utility Operating Income as % of Net Plant	10.4	10.0	10.9	11.5	10.7	9.9	9.4
Operating Revenue as % of Total Plant	138.5	150.2	151.6	145.0	123.7	102.5	85.5
Common Dividend Payout Ratio	72.6	73.2	67.1	67.1	81.3	104.2	83.5
Return on Common Equity	12.4	11.8	14.0	15.7	14.0	12.0	11.6
Return on Average Common Equity	12.9	12.3	15.1	16.3	a	a	12.1
Return on Net Plant	5.3	5.2	6.6	7.4	6.7	5.4	5.2
Pretax Interest Coverage of:							
Total Interest Expense[b]	2.6	2.6	3.3	3.8	3.6	3.1	3.1
Long-Term Debt Interest Expense[b]	3.8	3.3	3.9	4.5	4.3	3.7	3.7
Allowance for Funds Used During Construction as % of Net Income	4.7	4.3	2.3	1.8	1.1	1.3	2.1
Expenses							
Operating Expenses as % of Operating Revenue	94.9	95.5	95.2	94.8	94.2	93.6	92.6
Maintenance Expenses as % of Total Plant	2.2	2.2	2.5	2.5	2.4	2.4	2.2
Depreciation Expenses as % of Total Plant	3.2	3.2	3.4	3.3	3.3	3.5	3.3
Depreciation Expenses as % of Depreciable Plant	3.2	3.3	3.4	3.4	3.4	3.6	3.3
Total Taxes as % of Total Plant	9.3	9.7	11.2	11.7	10.8	9.7	8.0
Total Taxes as % of Net Plant	13.4	14.1	16.5	17.5	16.0	14.4	11.9
Total Taxes as % of Net Income plus Total Taxes	70.4	71.7	70.3	69.1	69.4	71.6	68.5
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[c]	28.9	29.9	28.8	40.6	33.4	38.6	37.2
Plant							
Total Plant as % of Total Operating Revenue	72.2	66.6	66.0	69.0	80.8	97.6	117.0
Net Plant as % of Total Operating Revenue	50.2	45.6	44.7	46.1	54.6	65.8	79.0
Depreciation Reserve as % of Total Plant	30.5	31.4	32.2	33.1	32.4	32.6	32.5
Depreciation Reserve as % of Depreciable Plant	31.1	32.0	32.8	33.9	33.2	33.1	33.2
Total Plant per Employee ($000)	219.5	234.1	241.4	259.2	281.3	301.9	324.6
Capitalization							
Long-term Debt as % of Net Plant	40.3	41.4	40.5	39.1	38.0	40.2	38.8
% Total Capitalization Represented by:							
a. Long-term Debt	46.2	46.0	44.1	43.1	42.4	45.5	44.6
b. Preferred Stock	4.6	4.5	4.9	4.6	4.2	3.6	3.4
c. Common Equity	49.2	49.5	51.0	52.3	53.4	50.9	52.0
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	49.2	55.0	65.2	78.0	73.1	52.9	56.9
b. Equity Issues	12.8	22.6	14.8	7.3	4.9	7.9	14.6
c. Debt Issues	38.0	22.4	20.0	14.7	22.0	39.2	28.5

a. Not available.
b. Reflects pre-federal income tax coverage.
c. Includes "Investment Tax Credit Adjustment."
R-Revised.

ANALYTICAL RATIOS

TABLE 14-3
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY TRANSMISSION COMPANIES, 1965-1987

	1965	1970	1975	1980	1985	1986[R]	1987
Earnings							
Utility Operating Income as % of Total Plant	4.9	5.3	6.8	6.7	5.9	6.0	4.9
Utility Operating Income as % of Net Plant	7.0	7.8	11.7	12.7	12.9	12.6	11.9
Operating Revenue as % of Total Plant	35.5	36.2	58.5	137.2	117.0	79.4	63.7
Common Dividend Payout Ratio	75.9	72.5	50.9[a]	56.3[a]	124.5[a]	167.4[a]	189.2[a]
Return on Common Equity	12.1	11.7	14.9[a]	15.6[a]	8.5[a]	5.4[a]	4.4[a]
Return on Average Common Equity	12.3	12.1	15.8	16.4	8.5	c	4.2
Return on Net Plant	4.2	4.4	10.1	13.8	8.9	5.6	4.9
Pretax Coverage of:							
Total Interest Expense[b]	3.3	2.5	3.6	3.9	2.9	2.3	1.8
Long-Term Debt Interest Expense[b]	3.6	3.0	4.3	5.2	3.7	3.2	2.7
Allowance for Funds Used During Construction of % of Net Income	4.8	4.3	3.0	5.4	2.5	2.7	3.3
Expenses							
Operating Expenses as % of Operating Revenue	86.5	85.8	88.8	95.4	95.3	93.2	93.0
Maintenance Expenses as % of Total Plant	0.7	0.7	0.9	1.3	1.3	1.4	1.3
Depreciation Expenses as % of Total Plant	3.1	3.1	4.4	4.1	3.8	3.9	3.4
Depreciation Expenses as % of Depreciable Plant	c	c	4.4	4.5	3.8	4.1	3.6
Total Taxes as % of Total Plant	3.1	2.3	5.0	6.6	5.1	4.5	3.2
Total Taxes as % of Net Plant	4.4	3.4	8.6	12.5	11.0	9.5	7.8
Total Taxes as % of Net Income plus Total Taxes	48.4	40.0	44.6[a]	46.1[a]	53.0[a]	59.3[a]	57.6[a]
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[d]	35.9	26.2	35.6[a]	28.4[a]	39.6[a]	39.3[a]	16.5[a]
Plant							
Total Plant as % of Total Operating Revenue	281.4	276.0	171.0	72.9	85.4	125.9	157.0
Net Plant as % of Total Operating Revenue	198.9	186.4	98.5	38.4	39.2	60.1	64.8
Depreciation Reserve as % of Total Plant	29.3	32.5	42.4	47.3	54.1	52.2	58.7
Depreciation Reserve as % of Depreciable Plant	c	c	43.8	52.1	55.5	54.3	59.9
Total Plant per Employee ($000)	388.7	505.0	547.1	673.1	844.0	895.8	967.0
Capitalization							
Long-term Debt as % of Net Plant	61.8	62.1	71.8	64.1	64.3	58.8	73.3
% Total Capitalization Represented by:							
a. Long-term Debt	58.8	57.1	48.6	39.4	36.4	34.9	39.3
b. Preferred Stock	8.4	8.5	5.8	6.7	4.3	3.4	1.5
c. Common Equity	32.9	34.4	45.5	53.9	59.3	61.7	59.2
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	c	c	55.4	65.1	75.9	69.0	57.9
b. Equity Issues	c	c	3.7	6.0	0.0	3.8	0.0
c. Debt Issues	c	c	40.9	28.9	24.1	27.2	42.1

a. Not comparable with 1970 and prior years due to a 1973 Federal Power Commission ruling requiring adoption of the equity method in reporting earnings of subsidiaries.

b. Reflects pre-federal income tax coverage.

c. Not available.

d. Includes "Investment Tax Credit Adjustment."

R Revised.

TABLE 14-4
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY INTEGRATED COMPANIES, 1981-1987

	1981	1982	1983	1984	1985	1986[R]	1987
Earnings							
Utility Operating Income as % of Total Plant	6.3	7.1	7.5	8.3	7.5	7.5	7.0
Utility Operating Income as % of Net Plant	9.6	10.9	11.7	12.9	12.6	11.6	10.8
Operating Revenue as % of Total Plant	132.8	143.2	140.7	134.5	122.5	100.9	79.7
Common Dividend Payout Ratio	56.6	66.2	74.1	78.7	154.6	79.7	76.5
Return on Common Equity	16.0	14.2	12.8	13.1	5.6	11.9	11.3
Return on Average Common Equity	17.0	14.9	13.2	13.0	a	a	12.0
Return on Net Plant	9.4	8.6	8.4	8.8	4.4	7.3	6.9
Pretax Coverage of:							
Total Interest Expense[b]	3.2	3.0	3.4	3.7	2.3	3.0	2.7
Long-Term Debt Interest Expense[b]	4.8	4.2	4.1	4.4	3.5	4.4	4.1
Allowance for Funds Used During Construction as % of Net Income	1.6	1.8	0.9	0.7	1.5	1.0	1.7
Expenses							
Operating Expenses as % of Operating Revenue	95.4	95.2	94.8	93.9	94.0	92.7	91.4
Maintenance Expenses as % of Total Plant	2.3	2.4	2.2	2.3	2.2	2.2	2.0
Depreciation Expenses as % of Total Plant	3.5	3.5	3.7	3.6	4.0	3.1	3.2
Depreciation Expenses as % of Depreciable Plant	3.7	3.7	3.9	3.8	4.0	a	a
Total Taxes as % of Total Plant	8.0	8.5	9.2	9.9	8.4	8.4	6.7
Total Taxes as % of Net Plant	12.2	13.0	14.3	15.6	14.1	13.0	10.4
Total Taxes as % of Net Income plus Total Taxes	55.4	59.0	61.3	61.2	71.7	62.7	58.7
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[c]	20.7	20.1	34.4	39.7	51.4	21.3	42.3
Plant							
Total Plant as % of Total Operating Revenue	75.3	69.8	71.1	74.4	81.6	99.1	125.5
Net Plant as % of Total Operating Revenue	49.4	45.7	45.7	47.5	48.6	64.2	81.0
Depreciation Reserve as % of Total Plant	34.3	34.6	35.8	36.1	40.4	35.2	35.5
Depreciation Reserve as % of Depreciable Plant	36.8	36.8	38.0	38.4	40.6	35.9	36.5
Total Plant per Employee ($000)	255.5	259.0	275.1	289.7	328.0	294.6	327.8
Capitalization							
Long-term Debt as % of Net Plant	50.3	52.5	52.7	52.6	37.1	52.9	50.2
% Total Capitalization Represented by:							
a. Long-term Debt	44.1	44.2	42.4	41.2	40.6	44.5	43.1
b. Preferred Stock	4.6	4.8	4.5	5.0	3.7	4.2	4.9
c. Common Equity	51.3	51.0	53.2	53.8	55.7	51.3	52.0
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	64.7	48.5	69.3	78.5	89.7	66.3	67.0
b. Equity Issues	7.8	3.8	9.7	5.3	3.0	0.4	11.1
c. Debt Issues	27.5	47.7	21.0	16.2	7.3	33.3	21.9

a. Not available.
b. Reflects pre-federal income tax coverage.
c. Includes "Investment Tax Credit Adjustment."
R–Revised

TABLE 14-5
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY COMBINATION COMPANIES, 1981-1987

	1981	1982	1983	1984	1985	1986[R]	1987
Gas Operations							
Earnings							
Utility Operating Income as % of Total Plant	7.4	8.2	8.4	9.3	8.7	7.5	6.8
Utility Operating Income as % of Net Plant	10.8	12.2	12.7	14.3	11.5	10.0	9.3
Operating Revenue as % of Total Plant	117.3	128.6	129.7	129.5	121.5	96.0	84.2
Common Dividend Payout Ratio	64.1	57.9	62.0	52.7	71.6	70.9	89.7
Return on Common Equity	14.8	17.2	17.0	19.2	12.0	12.0	10.1
Return on Average Common Equity	15.3	17.9	17.4	19.8	13.2	c	10.1
Return on Net Plant	5.6	6.8	6.8	8.1	5.0	5.1	4.2
Pretax Coverage of:							
Total Interest Expense[a]	2.8	3.2	3.3	3.6	3.4	3.1	3.1
Long-Term Debt Interest Expense[a]	3.4	3.8	3.7	4.0	3.7	3.4	3.5
Allowance for Funds Used During Construction as % of Net Income	32.6	31.0	34.5	26.8	28.3	20.1	12.6
Expenses							
Operating Expenses as % of Operating Revenue	95.0	94.9	94.9	94.1	93.9	93.1	92.5
Maintenance Expenses as % of Total Plant	2.5	2.5	2.4	2.4	2.4	2.3	2.3
Depreciation Expenses as % of Total Plant	3.1	3.2	3.3	3.5	3.6	3.7	3.7
Depreciation Expenses as % of Depreciable Plant	3.2	3.3	3.6	3.7	3.7	3.9	3.8
Total Taxes as % of Total Plant	7.4	8.9	9.1	10.1	9.7	8.4	7.8
Total Taxes as % of Net Plant	10.8	13.2	13.8	15.5	12.8	11.2	10.6
Total Taxes as % of Net Income plus Total Taxes	61.6	62.5	63.2	62.2	67.9	65.3	68.5
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[b]	21.6	22.8	20.1	40.1	38.5	28.6	37.8
Plant							
Total Plant as % of Total Operating Revenue	85.3	77.8	77.1	77.2	82.3	104.2	118.7
Net Plant as % of Total Operating Revenue	58.5	52.6	51.1	50.3	62.2	77.6	87.2
Depreciation Reserve as % of Total Plant	31.4	32.4	33.7	34.9	24.4	25.5	26.6
Depreciation Reserve as % of Depreciable Plant	32.6	33.7	36.3	36.5	25.4	26.9	27.7
Total Plant per Employee ($000)	253.3	267.4	280.2	298.3	299.2	318.8	342.1
All Operations							
Earnings							
Utility Operating Income as % of Total Plant	7.1	7.6	7.9	8.0	7.6	7.3	6.5
Utility Operating Income as % of Net Plant	9.2	9.8	10.2	10.5	10.0	9.8	8.8
Operating Revenue as % of Total Plant	42.5	42.6	40.8	42.1	52.3	36.9	34.2
Common Dividend Payout Ratio	73.3	69.4	68.6	63.7	74.1	69.6	111.0
Return on Common Equity	11.7	12.9	13.5	13.8	11.8	12.6	8.3
Return on Average Common Equity	12.3	13.8	14.4	13.9	12.3	c	8.2
Return on Net Plant	4.4	5.0	5.3	5.7	4.9	5.3	3.4
Pretax Coverage of:							
Total Interest Expense[a]	2.6	2.9	3.1	3.2	3.0	3.2	2.9
Long-Term Debt Interest Expense[a]	3.1	3.4	3.4	3.5	3.3	3.5	3.2
Allowance for Funds Used During Construction as % of Net Income	37.2	37.0	41.5	34.8	37.2	26.6	22.9
Expenses							
Operating Expenses as % of Operating Revenue	86.9	86.2	85.6	85.2	84.9	83.5	83.0
Maintenance Expenses as % of Total Plant	2.1	2.2	2.1	2.2	2.2	2.2	2.2
Depreciation Expenses as % of Total Plant	2.4	2.5	2.4	2.6	2.6	2.7	2.8
Depreciation Expenses as % of Depreciable Plant	3.1	3.3	3.4	3.5	3.5	3.4	3.2
Total Taxes as % of Total Plant	4.7	5.4	5.6	6.2	5.9	6.1	5.4
Total Taxes as % of Net Plant	6.1	7.0	7.3	8.1	7.8	8.1	7.3
Total Taxes as % of Net Income plus Total Taxes	53.5	54.3	54.0	55.2	57.7	57.1	64.7
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[b]	20.7	28.7	23.2	27.4	28.5	25.7	33.5
Plant							
Total Plant as % of Total Operating Revenue	235.4	234.8	245.4	237.4	252.4	270.8	292.7
Net Plant as % of Total Operating Revenue	181.4	180.8	189.6	180.6	191.2	202.3	215.7
Depreciation Reserve as % of Total Plant	22.9	23.0	22.7	23.9	24.2	25.3	26.3
Depreciation Reserve as % of Depreciable Plant	29.7	30.4	32.1	32.3	32.0	32.1	30.3
Capitalization							
Long-term Debt as % of Net Plant	44.6	44.7	44.3	45.8	44.8	44.6	44.8
% Total Capitalization Represented by:							
a. Long-term Debt	47.5	47.1	46.7	46.8	46.7	46.7	47.9
b. Preferred Stock	12.9	12.3	12.1	11.2	10.2	9.1	8.4
c. Common Equity	39.6	40.6	41.3	42.0	43.1	44.2	43.7
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	41.3	49.8	54.7	45.4	52.3	60.7	72.4
b. Equity Issues	23.7	30.3	18.6	20.2	28.6	6.5	6.4
c. Debt Issues	35.0	19.9	26.7	34.4	19.1	32.8	21.2

a. Reflects pre-federal income tax coverage.
b. Includes "Investment Tax Credit Adjustment."
c. Not available.
R–Revised.

TABLE 14-6
SELECTED ANALYTICAL RATIOS RELATING TO INVESTOR-OWNED GAS UTILITY INDUSTRY OPERATING AND MAINTENANCE EXPENSES, 1975-1987[a]

	Total Operating and Maintenance Expense per Therm of Sales (cents)					Total Operating Revenue per Therm of Sales (cents)				
Type of Activity	1975	1980	1985	1986	1987	1975	1980	1985	1986	1987
Natural Gas Distribution[b]	11.53	29.37	46.65	43.06	39.95	15.12	34.82	56.68	53.66	50.68
Natural Gas Transmission	6.07	22.12	35.62	31.87	29.79	8.35	25.23	40.57	38.60	36.08
	Transmission and Distribution Expense per Mile of Pipe (dollars)					Total Cost of Purchases as Percent of Total Operating and Maintenance Expense (%)				
Type of Activity	1975	1980	1985	1986	1987	1975	1980	1985	1986	1987
Natural Gas Distribution[b]	1,904.73	2,666.68	3,396.86	3,531.81	3,576.91	77.74	85.80	84.21	80.54	77.33
Natural Gas Transmission	3,836.43	11,510.06	13,899.46	12,101.60	11,064.36	86.09	90.66	87.12	81.38	78.00
	Customer Accounts Expense Per Customer (dollars)					Total Payroll as Percent of Total Operating and Maintenance Expense (%)				
Type of Activity	1975	1980	1985	1986	1987	1975	1980	1985	1986	1987
Natural Gas Distribution[b]	13.90	22.68	33.33	33.32	32.65	14.97	9.05	8.92	10.71	12.41
Natural Gas Transmission						5.99	2.97	4.10	5.70	6.73
	Gross Sales Expense per Customer (dollars)									
Type of Activity	1975	1980	1985	1986	1987					
Straight Natural Gas Distribution	2.90	2.94	4.95	5.27	5.19					
Combination Natural Gas Distribution	1.16	0.60	1.07	1.35	1.54					

a. Integrated companies excluded.

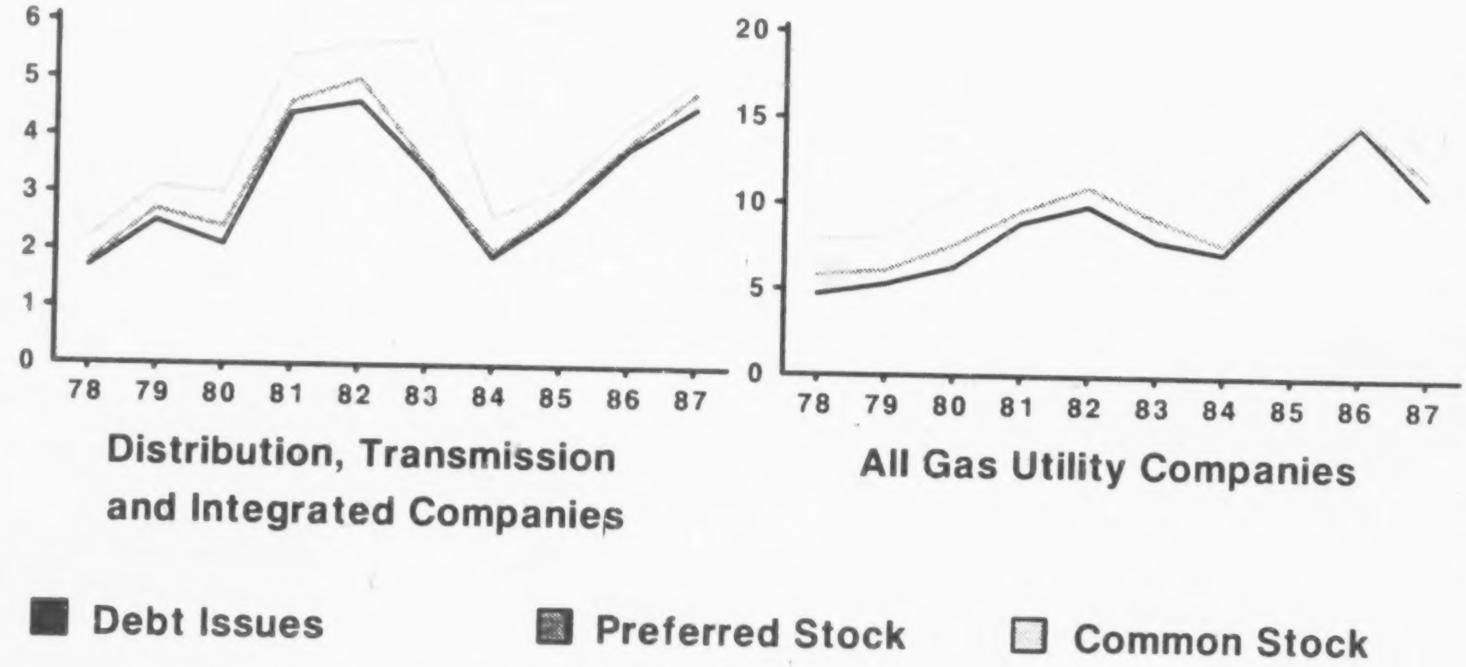
b. Includes both straight gas and combination companies.

SECTION 15
SECURITY ISSUES

	1987	% Change 87/86
No. of Issues		
Total	359	−13.5
Common Stock	182	− 2.2
Preferred	20	+33.3
Debt Issues	157	−26.6
Amount		
(Thousands)		
Total	$12,994,680	−24.5
Common Stock	1,324,596	−30.5
Preferred Stock	1,001,299	+67.9
Debt Issues	10,668,785	−27.5

CHART 15-1

GAS UTILITY NEW SECURITY ISSUES
(BILLIONS OF DOLLARS)



REFERENCE: TABLES 15-1, 15-4, 15-6, 15-8, 15-10, 15-12

TABLE 15-1
GAS UTILITY INDUSTRY SECURITY ISSUES OF DISTRIBUTION, INTEGRATED, TRANSMISSION, HOLDING,[a] AND COMBINATION GAS AND ELECTRIC COMPANIES
1965-1987[b]

	Total		Common Stock		Preferred Stock		Debt Issues							
							Total		Bonds		Debentures		Notes	
Year	No of Issues	Amount (000)	No of Issues	Amount (000)	No of Issues	Amount (000)	No of Issues	Amount (000)	No of Issues	Amount (000)	No of Issues	Amount (000)	No of Issues	Amount (000)
1965	176	$ 1,728,807	60	$ 99,444	28	$ 324,790	88	$ 1,304,573	61	$ 854,010	18	$ 410,900	9	$ 39,663
1970	280	6,030,084	68	745,638	33	620,674	179	4,663,772	125	3,502,000	27	897,500	27	264,272
1971	330	7,012,900	96	1,283,271	47	965,439	187	4,764,190	103	3,193,366	26	927,500	58	643,324
1972	280	6,832,495	83	1,306,307	39	1,185,808	158	4,340,380	87	3,032,306	13	554,500	58	753,574
1973	286	6,302,378	96	1,408,410	39	1,073,959	151	3,820,009	82	2,466,690	6	260,000	63	1,093,319
1974	286	7,889,359	102	1,144,544	39	1,128,175	145	5,616,640	78	3,950,281	17	739,519	50	926,840
1975	353	8,312,575	141	1,973,385	42	1,059,396	170	5,279,794	101	3,661,125	19	911,571	50	707,098
1976	336	9,104,026	152	2,472,747	41	1,108,268	143	5,523,011	75	2,899,279	16	860,500	52	1,763,232
1977	336	8,244,438	167	1,864,904	40	1,106,130	129	5,273,404	70	2,956,200	10	461,500	49	1,855,704
1978	351	7,933,090	163	2,167,077	48	1,055,458	140	4,710,555	73	3,189,650	12	306,516	55	1,214,389
1979	322	7,959,649	162	1,860,954	30	773,692	130	5,325,003	69	2,908,350	11	895,000	50	1,521,653
1980	275	10,508,334	101	2,879,775	31	1,288,237	143	6,340,322	73	3,571,945	18	1,510,000	52	1,258,377
1981	472	12,384,931	246	2,816,829	27	654,940	199	8,913,162	110	5,051,554	16	1,207,500	73	2,654,108
1982	523	14,794,327	287	3,832,926	32	1,073,300	204	9,888,101	107	4,538,410	20	1,356,000	77	3,993,691
1983	499	14,014,964	275	4,855,205	29	1,301,151	145	7,858,608	86	4,651,154	12	1,024,703	47	2,182,751
1984	386	10,596,488	229	2,852,559	13	538,000	144	7,205,929	90	4,452,571	12	838,250	42	1,915,108
1985	415	13,893,132	222	2,428,977	12	325,701	181	11,138,454	85	6,131,774	9	770,015	87	4,236,665
1986	415	17,218,513	186	1,906,278	15	596,318	214	14,715,917	126	9,628,924	28	2,586,000	60	2,500,993
1987	359	12,994,680	182	1,324,596	20	1,001,299	157	10,668,785	66	4,403,166	21	2,664,530	70	3,601,089

a. Holding companies used in this section are as follows: Columbia Gas Systems, Inc., Northeast Utilities, Northern States Power Company, Public Service Company of Colorado, Tenneco, Inc., Texas Eastern Corp., Utilicorp United, Inc., Washington Energy Company, and Wisconsin Electric Power Company.

b. All new and refunding security issues, except sales by subsidiaries to parent companies and direct exchanges for which data were obtainable have been included. Short term notes for less than one year are omitted. Bonds, debentures, and notes are included in principal amounts; preferred stocks at stated or liquidating values, and common stocks at offerings prices.

TABLE 15-2

GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF SECURITY ISSUES OF DISTRIBUTION, INTEGRATED, TRANSMISSION, HOLDING,[a] AND COMBINATION GAS AND ELECTRIC COMPANIES

1965-1987[b]

	Preferred Stock				Bonds				Debentures				Sample Amount (000)		
	Cost %		Yield %		Cost %		Yield %		Cost %		Yield %				
Year	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Preferred Stock	Bonds	Debentures
1965	4.71	4.78	4.69	4.76	4.77	4.74	4.75	4.71	4.84	4.87	4.81	4.82	$ 268,200	$ 806,460	$ 403,700
1970	9.25	9.27	9.16	9.18	9.04	9.08	9.06	9.26	9.16	9.36	9.06	9.26	570,674	3,492,500	897,000
1971	8.16	7.98	8.05	7.87	8.06	7.90	7.97	7.81	8.16	8.14	8.07	8.05	922,312	3,098,589	912,500
1972	7.70	7.65	7.62	7.56	7.60	7.56	7.53	7.50	7.53	7.44	7.46	7.38	1,074,539	2,631,306	455,500
1973	7.72	7.61	7.66	7.54	7.98	7.93	7.91	7.87	7.80	7.77	7.73	7.71	1,051,459	2,137,890	200,000
1974	9.96	9.83	9.82	9.68	9.76	9.84	9.67	9.75	9.48	9.34	9.40	9.25	996,175	3,222,000	535,000
1975	10.87	10.89	10.55	10.53	10.10	10.06	10.00	9.97	10.28	10.31	10.17	10.20	1,028,515	3,346,050	801,000
1976	10.15	9.49	9.16	9.24	8.96	9.01	8.87	8.93	8.88	8.87	8.81	8.80	1,050,268	2,826,590	735,000
1977	8.50	8.45	8.34	8.31	8.51	8.50	8.45	8.44	8.74	8.36	8.63	8.29	973,512	2,682,500	265,000
1978	8.84	8.90	8.75	8.68	8.40	8.18	8.38	8.01	9.26	9.02	9.12	8.89	806,206	2,669,900	150,000
1979	9.05	9.32	9.03	9.23	11.14	10.55	11.12	10.48	10.81	11.12	10.65	11.04	705,500	2,348,300	645,000
1980	11.91	12.40	11.67	12.20	11.99	12.92	11.90	12.82	13.07	12.67	12.97	12.57	935,500	3,038,400	925,000
1981	13.75	14.06	13.57	13.80	15.06	16.55	14.77	16.29	16.24	16.11	15.80	15.76	630,500	3,956,154	1,207,500
1982	14.39	14.61	14.20	14.32	14.39	14.94	14.27	14.82	15.46	15.19	15.17	14.95	858,800	3,914,100	1,356,000
1983	11.69	12.18	11.42	11.85	11.82	12.10	11.63	11.96	12.40	13.54	12.23	13.39	1,209,175	3,958,380	780,000
1984	13.34	13.22	13.11	12.97	12.61	12.99	12.43	12.84	11.82	11.83	11.72	11.72	538,000	3,662,570	786,250
1985	11.68	11.67	11.65	11.67	10.80	11.13	10.47	10.93	11.24	11.58	11.11	11.46	101,000	4,477,947	722,189
1986	9.06	9.50	8.98	9.43	9.30	9.53	9.13	9.43	9.65	10.20	9.47	10.00	523,000	7,679,027	2,566,000
1987	7.50	7.38	7.37	7.34	9.25	9.56	9.18	9.49	9.29	9.26	9.09	9.15	544,174	3,614,455	1,503,500

a. Refer to Table 15-1 for name of holding companies.

b. Includes only those preferred stocks, bonds, and debentures shown in Table 15-1 for which necessary cost and yield data were available.

Definitions: "Cost" refers to the expenses incurred by a company relative to new security issues over the life of debt issues and fixed dividends (if applicable) on preferred stocks. It includes underwriter fees, plus discount expenses less premiums.

"Yield" is the rate of return on investment by a buyer of these debt issues and fixed dividends (if applicable) expected on preferred stock. It includes underwriter fees, plus premium expenses less discounts.

TABLE 15-3
GAS UTILITY INDUSTRY LONG TERM DEBT ISSUES, BY MOODY'S BOND RATING CATEGORY, 1987

	Issues		Cost %		Yield %	
Rating	Number	Sample Amount (000)	Average	Weighted Average	Average	Weighted Average
Aaa	1	$ 45,000	9.56	9.56	9.50	9.50
Aa	6	$ 510,000	8.84	8.87	8.76	8.79
A	6	$ 1,050,000	9.41	9.53	9.32	9.45
Baa	14	$ 1,508,300	10.08	10.06	10.02	9.98
Ba	*	*	*	*	*	*
B	*	*	*	*	*	*

*No issues used in this sample.

TABLE 15-4
GAS UTILITY INDUSTRY COMMON STOCK ISSUES, BY TYPE OF COMPANY
1981-1987[a]

Type of Company	1981	1982	1983	1984	1985	1986	1987
Total							
Amount (000)	$2,816,829	$3,832,926	$4,855,205	$2,852,559	$2,428,977	$1,906,278	$1,324,596
No. of Issues	246	287	275	229	222	186	182
Distribution							
Amount (000)	$178,822	$69,503	$272,950	$224,065	$304,841	$300,911	$109,011
No. of Issues	33	30	43	34	62	65	67
Transmission							
Amount (000)	$565,822	$375,298	$159,889	$35,625	$300	$1,000	$6,973
No. of Issues	11	10	7	1	1	1	4
Integrated							
Amount (000)	$84,240	$121,926	$1,835,208	$334,095	$35,023	$26,593	$76,820
No. of Issues	20	44	34	39	16	10	16
Combination Utilities							
Amount (000)	$1,839,529	$2,984,412	$2,394,543	$1,742,913	$1,767,779	$1,469,309	$951,863
No. of Issues	169	194	183	136	121	99	83
Holding[b]							
Amount (000)	$148,416	$281,787	$192,615	$515,861	$321,034	$108,465	$179,929
No. of Issues	13	9	8	19	22	11	12

a. See Footnote "b", Table 15-1 for description of securities included and the derivation of stated amounts.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

SECURITY ISSUES

TABLE 15-5
GAS UTILITY INDUSTRY INDEXES OF COMMON STOCK PRICES, DIVIDENDS, YIELDS, AND EARNINGS BY TYPE OF COMPANY, 1982–1987

Year	1982		1983		1984		1985		1986		1987	
Type of Company / Week	Jun 25	Dec 31	Jul 1	Dec 30	Jun 29	Dec 30	Jun 28	Dec 31	Jul 1	Dec 30	Jun 30	Dec 29
Natural Gas Industry												
a) Market Price ($ Per Share)	84.47	92.94	113.52	113.40	109.88	116.05	135.91	138.65	130.83	122.52	165.38	127.07
b) Dividend ($ Per Share)	6.89	7.14	7.05	7.29	7.44	7.71	7.89	8.12	8.02	7.69	7.61	7.51
c) Yield (Percent)	8.16	7.68	6.21	6.43	6.77	6.64	5.81	5.86	6.13	6.27	4.60	5.91
d) Earnings ($ Per Share)[a]	16.34	14.98	13.11	12.92	14.88	12.46	9.48	8.48	9.48	8.47	b	b
Distribution Companies												
a) Market Price ($ Per Share)	48.27	50.62	55.49	55.79	56.87	69.70	81.61	76.58	95.58	88.66	88.48	75.96
b) Dividend ($ Per Share)	5.29	5.39	5.42	5.55	5.67	5.88	6.03	6.22	5.51	5.71	5.84	6.02
c) Yield (Percent)	10.96	10.65	9.77	9.95	9.97	8.44	7.39	8.12	5.76	6.44	6.60	7.93
d) Earnings ($ Per Share)[a]	8.22	7.46	6.34	6.66	9.99	2.58	2.43	2.42	2.43	7.42	b	b
Transmission Companies												
a) Market Price ($ Per Share)	99.17	114.32	141.88	142.96	137.19	145.38	167.48	175.87	176.25	154.25	194.30	141.81
b) Dividend ($ Per Share)	8.56	8.90	8.59	8.89	9.04	9.39	9.66	9.91	9.93	9.22	9.23	8.86
c) Yield (Percent)	8.63	7.79	6.05	6.22	6.59	6.46	5.77	5.63	5.63	5.97	4.75	6.25
d) Earnings ($ Per Share)[a]	21.57	19.64	16.99	15.81	18.16	17.01	13.70	9.97	13.70	9.97	b	b

a. Earnings are for twelve month periods.

b. 1987 data not available.

Source: Moody's Investor Service, *Moody's Public Utility News Reports.*

TABLE 15-6
GAS UTILITY INDUSTRY PREFERRED STOCK ISSUES, BY TYPE OF COMPANY
1981-1987[a]

Type of Company	1981	1982	1983	1984	1985	1986	1987
Total							
Amount (000)	$654,940	$1,073,300	$1,301,151	$538,000	$325,701	$596,318	$1,001,299
No. of Issues	27	32	29	13	12	15	20
Distribution							
Amount (000)	$21,000	$8,000	$30,000	$10,000	$361	$22,118	$76,000
No. of Issues	2	1	1	1	3	3	5
Transmission							
Amount (000)	$125,206	$285,000	$0	$0	$20,000	$90,000	$59,174
No. of Issues	4	6	0	0	1	1	1
Integrated							
Amount (000)	$27,000	$102,000	$89,494	$100,000	$0	$0	$130,000
No. of Issues	1	4	5	1	0	0	1
Combination Utilities							
Amount (000)	$481,734	$675,300	$998,922	$428,000	$177,200	$454,200	$305,000
No. of Issues	20	20	19	11	6	10	8
Holding[b]							
Amount (000)	$0	$3,000	$182,735	$0	$128,140	$30,000	$431,125
No. of Issues	0	1	4	0	2	1	5

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[a] See Footnote "b", Table 15-1 for description of securities included and the derivation of stated amounts.

[b] A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

TABLE 15-7
GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF PREFERRED STOCK ISSUES
1981-1987[a]

	1981		1982		1983		1984		1985		1986		1987	
	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %
Total														
Average	13.75	13.57	14.39	14.20	11.69	11.42	13.34	13.11	11.68	11.65	9.06	8.98	7.50	7.37
Weighted Average	14.06	13.80	14.61	14.32	12.18	11.85	13.22	12.97	11.67	11.67	9.50	9.43	7.38	7.34
Sample Amount (000)		$630,500		$858,800		$1,209,175		$538,000		$101,000		$523,000		$544,174
Distribution														
Average	15.98	15.65	13.00	13.00	11.76	11.50	12.88	12.88	c	c	c	c	9.28	9.17
Weighted Average	16.41	15.79	13.00	13.00	11.76	11.50	12.88	12.88	c	c	c	c	9.49	9.38
Sample Amount (000)		$21,000		$8,000		$30,000		$10,000		$0		$0		$50,000
Transmission														
Average	13.28	13.00	14.55	14.27	c	c	c	c	8.80	8.80	8.75	8.75	6.11	6.11
Weighted Average	13.92	13.60	14.63	14.28	c	c	c	c	8.80	8.80	8.75	8.75	6.11	6.11
Sample Amount (000)		$125,000		$175,000		$0		$0		$20,000		$90,000		$59,174
Integrated														
Average	12.25	12.25	14.00	14.00	11.16	10.92	10.88	10.62	c	c	c	c	c	c
Weighted Average	12.25	12.25	14.00	14.00	11.04	10.81	10.88	10.62	c	c	c	c	c	c
Sample Amount (000)		$27,000		$5,000		$85,000		$100,000		$0		$0		$0
Combination Utilities														
Average	13.67	13.45	14.45	14.26	11.79	11.51	13.60	13.35	12.63	12.60	9.10	9.01	6.79	6.75
Weighted Average	14.10	13.86	14.63	14.35	12.36	12.01	13.78	13.52	12.38	12.37	9.66	9.57	7.20	7.17
Sample Amount (000)		$457,500		$670,800		$995,425		$428,000		$81,000		$433,000		$250,000
Holding[b]														
Average	c	c	c	c	11.48	11.27	c	c	c	c	c	c	7.59	7.23
Weighted Average	c	c	c	c	c	c	11.46	11.26	c	c	c	c	7.45	7.40
Sample Amount (000)		$0		$0		$98,750		$0		$0		$0		$185,000

a. Includes only those issues in Table 15-6 for which necessary cost and yield data were available.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

c. No issues used in this sample.

Definitions: "Cost" refers to the expenses incurred by a company. It includes dividends, underwriter fees, plus discount expenses less premiums.
"Yield" is the rate of return on investment by a buyer.

TABLE 15-8
GAS UTILITY INDUSTRY BOND ISSUES, BY TYPE OF COMPANY
1981–1987[a]

Type of Company	1981	1982	1983	1984	1985	1986	1987
Total							
Amount (000)	$5,051,554	$4,538,410	$4,651,154	$4,452,571	$6,131,774	$9,628,924	$4,403,166
No. of Issues	110	107	86	90	85	126	66
Distribution							
Amount (000)	$560,500	$135,000	$493,321	$117,355	$676,729	$798,539	$323,693
No. of Issues	20	12	13	7	20	33	12
Transmission							
Amount (000)	$875,000	$425,000	$225,000	$0	$0	$0	$220,400
No. of Issues	5	4	2	0	0	0	2
Integrated							
Amount (000)	$221,400	$150,647	$449,103	$227,150	$18,000	$313,000	$60,000
No. of Issues	6	8	12	6	1	4	1
Combination Utilities							
Amount (000)	$3,297,909	$3,701,163	$3,147,730	$3,922,866	$4,682,495	$6,813,105	$3,375,073
No. of Issues	74	81	52	73	54	72	44
Holding[b]							
Amount (000)	$96,745	$126,600	$336,000	$185,200	$754,550	$1,704,280	$424,000
No. of Issues	5	2	7	4	10	17	7

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a. See Footnote "b", Table 15-1 for description of securities included and the derivation of stated amounts.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

TABLE 15-9
GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF BOND ISSUES
1981-1987[a]

	1981		1982		1983		1984		1985		1986		1987	
	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %
Total														
Average	15.06	14.77	14.39	14.27	11.82	11.63	12.61	12.43	10.80	10.47	9.30	9.13	9.25	9.18
Weighted Average	16.55	16.29	14.94	14.82	12.10	11.96	12.99	12.84	11.13	10.93	9.53	9.43	9.56	9.49
Sample Amount (000)		$3,956,154		$3,914,100		$3,958,380		$3,662,570		$4,477,947		$7,679,027		$3,614,455
Distribution														
Average	16.09	15.99	15.30	15.30	12.16	12.07	13.41	13.38	10.11	9.11	9.25	9.15	9.63	9.60
Weighted Average	16.68	16.58	15.81	15.81	12.67	12.56	12.81	12.72	9.11	8.80	9.18	9.09	9.28	9.22
Sample Amount (000)		$497,500		$57,000		$350,450		$59,750		$400,200		$571,000		$193,000
Transmission														
Average	16.65	16.45	13.79	13.58	13.04	12.91	c	c	c	c	c	c	c	c
Weighted Average	16.47	16.27	14.18	13.98	13.04	12.91	c	c	c	c	c	c	c	c
Sample Amount (000)		$175,000		$225,000		$125,000		$0		$0		$0		$0
Integrated														
Average	15.88	15.76	15.12	14.98	12.27	12.13	14.47	14.29	c	c	8.97	9.08	9.22	9.14
Weighted Average	16.05	15.91	15.39	15.23	12.08	11.97	14.34	14.22	c	c	8.97	9.08	9.22	9.14
Sample Amount (000)		$218,000		$143,000		$394,000		$110,000		$0		$300,000		$60,000
Combination Utilities														
Average	14.73	14.57	14.28	14.15	11.73	11.55	12.46	12.27	10.92	10.53	9.39	9.20	9.20	9.13
Weighted Average	16.55	16.37	14.95	14.83	12.09	11.96	12.92	12.78	11.30	11.10	9.66	9.55	9.59	9.52
Sample Amount (000)		$2,968,909		$3,362,500		$2,777,930		$3,367,820		$3,802,747		$6,283,027		$3,027,455
Holding[b]														
Average	13.40	13.18	14.66	14.38	10.93	10.50	13.88	13.82	11.82	11.75	8.74	8.57	9.18	9.07
Weighted Average	15.57	15.30	15.09	14.98	11.20	10.87	13.61	13.55	11.74	11.66	8.67	8.55	9.59	9.48
Sample Amount (000)		$96,745		$126,600		$311,000		$125,000		$275,000		$525,000		$334,000

a. Includes only those issues in Table 15-8 for which necessary cost and yield data were available.
b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.
c. No issues used in this sample.
Definitions: "Cost" refers to the expenses incurred by a company. It includes dividends, underwriter fees, plus discount expenses less premiums.
"Yield" is the rate of return on investment by a buyer.

TABLE 15-10
GAS UTILITY INDUSTRY DEBENTURE ISSUES, BY TYPE OF COMPANY
1981–1987[a]

Type of Company	1981	1982	1983	1984	1985	1986	1987
Total							
Amount (000)	$1,207,500	$1,356,000	$1,024,703	$838,250	$770,015	$2,586,000	$2,664,530
No. of Issues	16	20	12	12	9	28	21
Distribution							
Amount (000)	$88,500	$0	$165,000	$0	$0	$316,000	$229,500
No. of Issues	4	0	3	0	0	10	6
Transmission							
Amount (000)	$689,000	$703,000	$324,703	$437,000	$355,750	$650,000	$1,921,030
No. of Issues	7	10	3	6	3	6	9
Integrated							
Amount (000)	$340,000	$308,000	$460,000	$120,000	$224,039	$270,000	$214,000
No. of Issues	3	4	5	3	2	3	4
Combination Utilities							
Amount (000)	$90,000	$245,000	$75,000	$181,250	$190,226	$900,000	$0
No. of Issues	2	5	1	2	4	5	0
Holding[b]							
Amount (000)	$0	$100,000	$0	$100,000	$0	$450,000	$300,000
No. of Issues	0	1	0	1	0	4	2

a. See Footnote "b", Table 15-1 for description of securities included and the derivation of stated amounts.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

TABLE 15-11
GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF DEBENTURE ISSUES
1981-1987[a]

	1981		1982		1983		1984		1985		1986		1987	
	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %
Total														
Average	16.24	15.80	15.46	15.17	12.40	12.23	11.82	11.72	11.24	11.11	9.65	9.47	9.29	9.09
Weighted Average	16.11	15.76	15.19	14.95	13.54	13.39	11.83	11.72	11.58	11.46	10.20	10.00	9.26	9.15
Sample Amount (000)		$1,207,500		$1,356,000		$880,000		$786,250		$722,189		$2,566,000		$1,503,500
Distribution														
Average	16.22	15.81	c	c	12.68	12.37	c	c	c	c	9.07	8.85	9.83	9.47
Weighted Average	17.20	16.85	c	c	12.41	12.23	c	c	c	c	9.06	8.78	9.84	9.63
Sample Amount (000)		$88,500		$0		$165,000		$0		$0		$316,000		$219,500
Transmission														
Average	16.65	16.24	15.85	15.66	13.30	13.19	13.16	13.06	12.56	12.42	9.79	9.70	9.33	9.24
Weighted Average	16.49	16.09	15.46	15.26	13.30	13.19	12.84	12.72	12.49	12.35	9.81	9.72	9.36	9.27
Sample Amount (000)		$689,000		$703,000		$200,000		$385,000		$355,750		$650,000		$770,000
Integrated														
Average	14.80	14.43	13.96	13.64	11.79	11.69	11.80	11.72	11.66	11.64	9.46	9.39	8.27	8.04
Weighted Average	14.86	14.69	13.85	13.63	11.21	11.12	12.30	12.26	11.75	11.73	9.37	9.29	7.11	6.98
Sample Amount (000)		$340,000		$308,000		$440,000		$120,000		$224,039		$250,000		$214,000
Combination Utilities														
Average	17.02	16.33	15.85	15.37	12.26	12.00	9.97	9.75	8.84	8.63	11.23	10.92	c	c
Weighted Average	16.78	16.22	15.95	15.53	12.26	12.00	10.26	10.03	9.02	8.81	11.69	11.36	c	c
Sample Amount (000)		$90,000		$245,000		$75,000		$181,250		$142,400		$900,000		$0
Holding[b]														
Average	c	c	15.57	15.57	c	c	10.26	10.25	c	c	9.00	8.90	9.91	9.81
Weighted Average	c	c	15.46	15.46	c	c	10.26	10.25	c	c	9.03	8.93	10.12	10.04
Sample Amount (000)		$0		$100,000		$0		$100,000		$0		$450,000		

a. Includes only those issues in Table 15-10 for which necessary cost and yield data were available.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

c. No issues used in this sample.

Definitions: "Cost" refers to the expenses incurred by a company. It includes dividends, underwriter fees, plus discount expenses less premiums.
"Yield" is the rate of return on investment by a buyer.

TABLE 15-12
GAS UTILITY INDUSTRY NOTE ISSUES, BY TYPE OF COMPANY
1981-1987[a]

Type of Company	1981	1982	1983	1984	1985	1986	1987
Total							
Amount (000)	$2,654,108	$3,993,691	$2,182,751	$1,915,108	$4,236,665	$2,500,993	$3,601,089
No. of Issues	73	77	47	42	87	60	70
Distribution							
Amount (000)	$123,135	$550,515	$438,635	$185,600	$46,860	$81,873	$276,561
No. of Issues	11	9	7	4	6	6	16
Transmission							
Amount (000)	$1,209,039	$1,671,000	$613,058	$296,500	$753,500	$930,195	$993,274
No. of Issues	21	19	9	5	17	11	15
Integrated							
Amount (000)	$281,479	$647,675	$185,356	$369,626	$710,950	$484,899	$290,862
No. of Issues	7	15	7	7	9	8	12
Combination Utilities							
Amount (000)	$978,455	$1,124,501	$762,967	$640,182	$1,807,740	$705,420	$1,761,793
No. of Issues	33	34	20	20	39	15	20
Holding[b]							
Amount (000)	$62,000	$0	$182,735	$423,200	$917,615	$298,606	$278,599
No. of Issues	1	0	4	6	16	20	7

[a] See Footnote "b", Table 15-1 for description of securities included and the derivation of stated amounts.

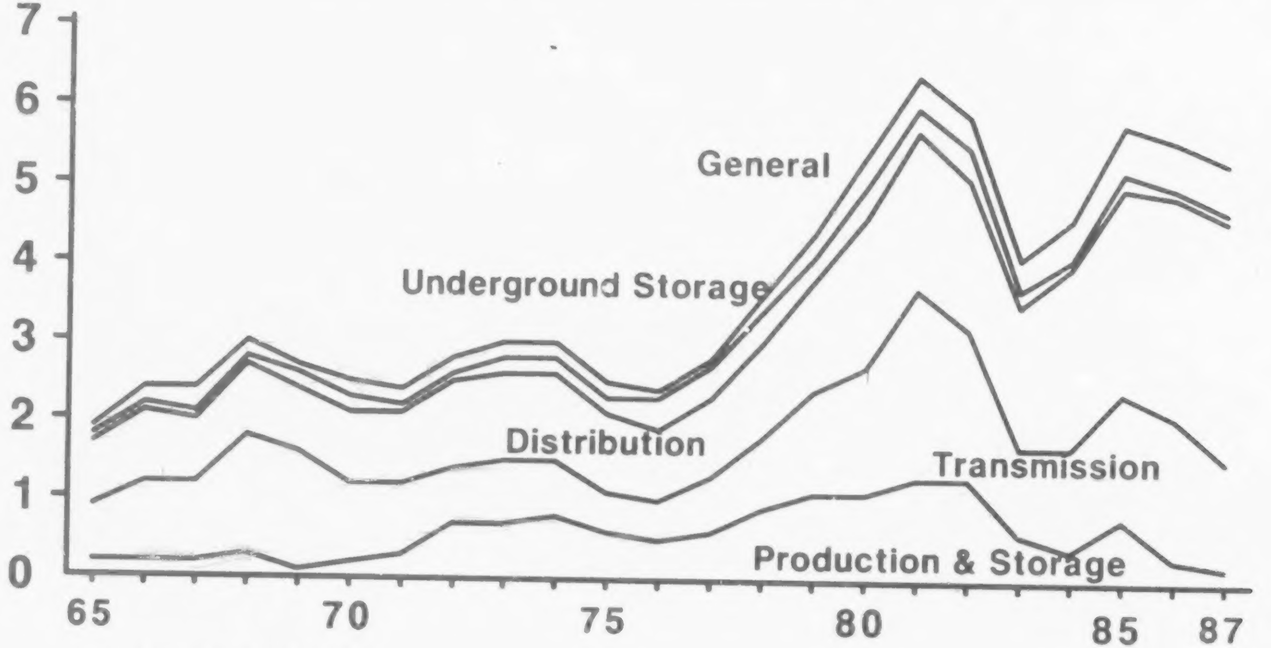
[b] A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1

SECTION 16
CONSTRUCTION EXPENDITURES

	1987	% Change 87/86
Construction Expenditures (Millions)		
Total	$5,328	− 0.3
Production & Storage	251	− 2.7
Transmission	1,295	−10.6
Underground Storage	107	−14.4
Distribution	3,055	+ 4.6
General	620	+ 4.9

CHART 16-1

GAS UTILITY INDUSTRY CONSTRUCTION EXPENDITURES (BILLIONS OF DOLLARS)



REFERENCE: TABLE 16-1

TABLE 16-1
GAS UTILITY INDUSTRY CONSTRUCTION EXPENDITURES, BY TYPE OF FACILITY, 1965–1991[a]

(Millions)

Year	Total	Production and Storage	Transmission	Underground Storage	Distribution	General
1965	$1,935	$ 156	$ 770	$ 69	$ 824	$116
1966	2,374	182	1,038	151	869	134
1967	2,252	186	1,006	91	848	121
1968	2,972	259	1,577	88	913	135
1969	2,686	83	1,511	128	863	101
1970	2,507	203	1,019	167	913	205
1971	2,419	340	842	171	888	178
1972	2,822	717	678	177	1,081	169
1973	2,966	771	746	201	1,094	155
1974	2,965	830	632	230	1,097	176
1975	2,466	555	590	276	910	136
1976	2,425	466	531	362	926	140
1977	2,833	620	670	323	1,048	172
1978	3,581	881	935	321	1,228	215
1979	4,366	1,125	1,226	281	1,448	286
1980	5,350	1,150	1,583	396	1,869	352
1981	6,389	1,346	2,352	326	1,955	410
1982	5,939	1,322	1,921	368	1,881	447
1983	4,078	607	1,065	139	1,845	422
1984	4,645	422	1,301	121	2,266	535
1985	5,671	790	1,562	175	2,577	567
1986	5,342	258	1,448	125	2,920	591
1987	5,328	251	1,295	107	3,055	620
1988(forecast)	6,118	276	1,707	130	3,248	757
1989(forecast)	6,591	292	2,194	114	3,287	704
1990(forecast)	5,835	291	1,460	88	3,317	679
1991(forecast)	5,712	287	1,338	97	3,346	644

[a] For companies not reporting 1990 and 1991 forecasts, data extrapolated from earlier years.

TABLE 16-2
GAS UTILITY INDUSTRY CONSTRUCTION EXPENDITURES, BY TYPE OF FACILITY, 1981–1987

	1981	1982	1983	1984	1985	1986	1987
Production and Storage	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
SNG Plant	2.3	2.7	0.5	0.8	0.3	0.5	0.1
LNG Plant	0.1	a	0.8	0.4	0.5	0.6	3.4
Propane Plant	3.0	3.8	7.3	11.3	0.6	1.8	2.0
Exploration and Drilling	18.7	22.1	22.6	25.7	28.5	32.1	6.5
Other[b]	71.1	66.1	65.8	54.5	64.9	51.3	69.5
LNG Storage	0.2	2.0	1.7	5.0	3.9	10.0	14.7
Other Storage	4.6	3.2	1.3	2.2	1.4	3.7	3.8
LNG Ships	0.0	0.0	0.0	a	0.0	0.0	0.0
Transmission	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
New and Replacement Pipe	79.6	77.3	72.5	73.2	72.4	76.9	82.0
Compressor Stations	13.8	18.8	21.4	20.6	21.3	17.4	13.2
Other	6.6	3.9	6.1	6.2	6.4	5.7	4.8
Distribution	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
New and Replacement Pipe	85.8	85.8	87.9	87.5	87.5	92.4	92.0
Compressor Stations	4.5	3.9	2.6	3.9	4.5	a	0.2
Other	9.7	10.3	9.5	8.6	8.0	7.6	7.8

a Less than 0.1 percent.

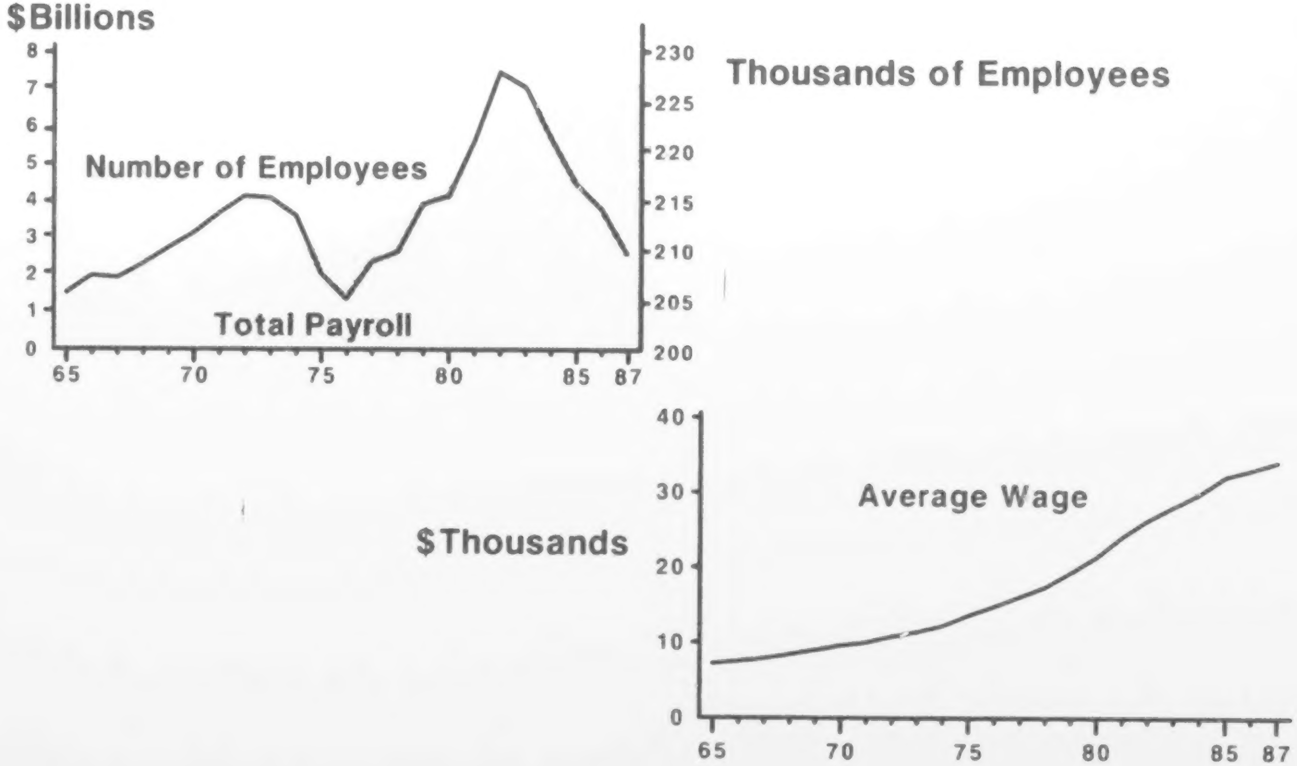
b Includes gathering.

SECTION 17
PERSONNEL DATA

	1987	% Change 87/86
Gas Utility Employees		
(Thousands)		
Total	209.7	− 2.1
Distribution	59.5	+ 0.3
Transmission	44.3	− 7.0
Integrated	42.2	+ 1.6
Combination	51.4	− 3.9
Municipals	12.3	+ 1.0

CHART 17-1

GAS UTILITY INDUSTRY PAYROLL, EMPLOYEES AND AVERAGE WAGE



REFERENCE: TABLE 17-1

PERSONNEL DATA

TABLE 17-1
GAS UTILITY INDUSTRY EMPLOYEES AND PAYROLL
1965–1987

Year	Average Number of Employees (Thousands)	Total Payroll (Thousands)	Average Wage per Employee
1965	205.7	$1,480,397	$ 7,200
1966	207.4	1,556,577	7,500
1967	207.2	1,640,397	7,920
1968	208.6	1,759,784	8,440
1969	210.2	1,890,490	8,990
1970	211.7	2,021,197	9,550
1971	213.7	2,142,892	10,028
1972	215.4	2,321,932	10,780
1973	215.2	2,449,075	11,381
1974	213.4	2,606,903	12,216
1975	207.6	2,817,150	13,570
1976	205.1	3,044,605	14,844
1977	208.8	3,371,856	16,149
1978	209.8	3,647,057	17,383
1979	214.6	4,134,270	19,265
1980	215.4	4,612,791	21,415
1981	220.9	5,313,445	24,057
1982	227.8	5,998,666	26,342
1983	226.3	6,365,305	28,128
1984	221.2	6,602,168	29,849
1985	216.6	6,959,057	32,132
1986[R]	214.1	7,072,535	33,019
1987	209.7	7,135,641	34,025

R - Revised.

TABLE 17-2
GAS UTILITY INDUSTRY EMPLOYEES AND PAYROLL BY TYPE OF PAYROLL AND TYPE OF COMPANY, 1965–1987

(Thousands)

	1965	1970	1975	1980	1984	1985	1986R	1987
Total								
Employees	205.7	211.7	207.6	215.4	221.2	216.6	214.1	209.7
Payroll—Total	$1,480,397	$2,021,197	$2,817,150	$4,612,791	$6,602,168	$6,959,057	$7,072,535	$7,135,641
Operating	1,146,226	1,606,321	2,292,448	3,652,941	5,292,915	5,515,089	5,717,005	5,760,104
Construction	262,792	325,546	380,835	627,706	890,048	962,353	986,504	1,019,411
Miscellaneous	71,379	89,330	143,867	332,144	419,205	481,615	369,026	356,126
Investor Owned—Total								
Employees	a	a	196.3	202.7	208.9	204.5	201.9	197.4
Payroll—Total	a	a	$2,675,092	$4,379,653	$6,285,649	$6,629,132	$6,730,941	$6,767,415
Operating	a	a	2,184,446	3,463,437	5,016,924	5,227,943	5,419,464	5,454,781
Construction	a	a	357,221	594,326	862,091	993,035	957,301	972,797
Miscellaneous	a	a	133,425	321,890	406,634	468,154	354,176	339,837
Distribution								
Employees	a	a	51.3	52.1	46.2	61.8	59.3	59.5
Payroll—Total	a	a	$697,552	$1,040,436	$1,241,732	$1,736,309	$1,761,169	$1,846,586
Operating	a	a	567,947	831,076	1,024,387	1,407,131	1,430,973	1,496,385
Construction	a	a	98,257	152,964	166,118	233,723	238,115	255,620
Miscellaneous	a	a	31,348	56,396	51,227	95,455	92,081	94,580
Transmission								
Employees	29.6	32.4	37.2	45.2	47.2	46.3	47.6	44.3
Payroll—Total	$228,493	$331,955	$574,275	$1,178,706	$1,663,635	$1,786,918	$1,819,689	$1,706,315
Operating	187,521	266,685	470,418	873,199	1,272,709	1,341,552	1,487,625	1,424,333
Construction	30,650	44,869	53,832	108,974	149,100	156,730	140,615	127,362
Miscellaneous	10,322	20,401	50,025	196,533	241,826	288,636	191,449	154,620
Integrated								
Employees	a	a	55.4	53.2	65.7	43.3	41.5	42.2
Payroll—Total	a	a	$676,967	$1,061,520	$1,800,005	$1,355,107	$1,324,953	$1,355,144
Operating	a	a	548,291	873,837	1,497,310	1,158,017	1,107,852	1,131,117
Construction	a	a	91,439	138,062	211,774	146,519	172,162	180,956
Miscellaneous	a	a	37,237	49,621	90,921	50,571	44,939	43,071
Combination								
Employees	a	a	52.4	52.2	49.7	53.1	53.5	51.4
Payroll—Total	a	a	$726,298	$1,098,991	$1,580,277	$1,750,798	$1,825,130	$1,859,370
Operating	a	a	597,790	885,325	1,222,518	1,321,243	1,393,014	1,402,945
Construction	a	a	113,693	194,326	335,099	396,063	406,409	408,859
Miscellaneous	a	a	14,815	19,340	22,660	33,492	25,707	47,566

a Not available

R-Revised

Note: Data by company type not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 17-3
EMPLOYEE ACCIDENT INCIDENT AND SEVERITY RATES OF SELECTED INDUSTRIES, 1985[a]

	Rate	
	Incident	Severity
Gas Utilities[b]	**2.92**	**17.47**
All Industries	**1.98**	**19.70**
Agricultural Chemicals	.65	16.92
Aircraft	.94	14.89
Air Transportation	5.16	17.44
Bituminous Coal	1.68	27.38
Cement	2.49	17.27
Chemical	.52	21.15
Communications	.90	16.67
Construction	3.31	17.82
Electric, Electronic Equipment	.88	15.91
Electric Service	1.40	18.57
Fabricated Metal Products	2.02	19.80
Food	3.29	19.76
Furniture and Fixtures	1.91	15.71
General Government	5.73	17.10
Iron and Steel Foundries	1.63	23.93
Leather	2.68	19.03
Lumber and Wood Products	4.33	24.25
Machinery, excluding Electrical	1.59	18.24
Meat Products	4.87	16.02
Metal Mining	2.02	33.66
Motor Vehicles	.89	25.84
Nonferrous Rolling, Drawing	1.43	23.08
Nonmetallic Minerals	1.26	37.30
Oil and Gas Extraction	1.05	25.71
Paper	1.87	28.34
Petroleum and Coal Products	.76	22.37
Pipeline Transportation	.99	19.19
Primary Nonferrous Metals	1.80	23.89
Printing and Publishing	2.47	17.41
Railroad Equipment	5.34	32.58
Railroad Transportation	3.43	38.78
Rubber and Plastics	2.14	18.69
Services	2.89	13.84
Ship and Boat Building	6.06	9.74
Steel	1.34	30.60
Stone, Clay and Glass	2.69	26.39
Textile	.46	30.43
Transit	9.96	19.08
Trucking	6.08	26.48
Water Transportation	2.71	36.53
Wholesale and Retail Trade	1.86	18.28

a. Incident rate is the number of disabling injuries per 100 full-time employees. Severity rate is average lost workdays per injury. 1986 data not available.

b. Gas figures derived from National Safety Council data.

Source: National Safety Council, *Accident Facts*, 1987.

TABLE 17-4
DEATH RATES OF WORKERS, BY MAJOR INDUSTRIES, 1986

	Deaths	
	Total	Per 100,000 Workers
All Industries	**10,700**	**10**
Agriculture	1,700	52
Construction	2,100	33
Government	1,300	8
Manufacturing	1,100	6
Mining, Quarrying, Oil and Gas Wells	400	50
Service	1,500	5
Trade	1,100	4
Transportation and Public Utilities	1,500	27
Gas[a]	8	4.25

a. Included in Transportation and Public Utilities. Data derived from A.G.A. *Report of Occupational Injuries and Illnesses in the Gas Utility and Transmission Industry in the United States*, and does not represent total industry.

Source: National Safety Council; *Accident Facts*, 1987; gas figures derived from A.G.A. data.

TABLE 17-5
EMPLOYEE DISABLING INJURY RATES, BY TYPE OF GAS UTILITY, 1965-1987

Z16.1 DATA

	All Reporting Gas Utilities				Natural Gas Distribution and Integrated Companies		Natural Gas Transmission Companies		Natural Gas Combination Companies[a]	
	Reporting Companies		Rate[b]		Rate		Rate		Rate	
Year	Number	Average Employees	Frequency[c]	Severity[d]	Frequency[c]	Severity[d]	Frequency[c]	Severity[d]	Frequency[c]	Severity[d]
1965	625	198,815	5.69	402	5.93	314	4.34	753	e	e
1970	719	200,493	6.34	548	6.66	522	5.02	686	e	e
1971	833	210,589	7.15	473	7.48	444	5.70	634	e	e
1972	736	205,371	8.38	535	8.98	495	5.88	762	e	e
1973	708	207,423	8.18	547	8.77[f]	373[f]	5.67	1,287	e	e
1974	644	208,283	9.08	357	9.75[g]	362[g]	6.12	333	e	e
1975	515	193,957	9.27	570	9.99[g]	518[g]	6.37	785	e	e
1976	407	153,538	11.17	365	12.87[g]	403[g]	5.31	236	e	e

OSHA DATA

	All Reporting Gas Utilities				Natural Gas Distribution and Integrated Companies		Natural Gas Transmission Companies		Natural Gas Combination Companies	
	Reporting Companies		Rate		Rate		Rate		Rate	
Year	Number	Average Employees	Incident[h]	Severity[i]	Incident[h]	Severity[i]	Incident[h]	Severity[i]	Incident[h]	Severity[i]
1977	433	243,773	2.46	18.01	3.31	15.86	1.09	20.63	2.00	20.54
1978	423	236,661	2.46	17.11	3.41	14.86	1.10	22.51	2.10	18.90
1979	443	256,797	2.52	16.76	3.57	15.01	1.16	24.71	1.97	17.81
1980	453	262,173	2.62	18.20	3.45	14.28	1.15	32.17	2.26	21.34
1981	437	278,402	2.52	25.09	3.43	17.08	1.09	26.34	2.17	37.53
1982	424	275,725	2.33	18.36	3.39	13.63	1.15	23.10	1.90	24.30
1983	431	272,236	2.33	18.02	3.44	13.91	1.09	20.55	1.82	24.66
1984	415	254,765	2.52	16.01	3.67	13.20	1.02	19.60	1.91	21.11
1985	439	229,658	2.36	17.12	3.64	14.28	1.07	47.02	1.13	15.14
1986	419	224,696	2.37	17.68	3.49	16.06	.95	38.21	1.58	15.56
1987	331	187,997	2.30	18.84	3.08	16.86	1.17	39.91	1.59	16.95

a. Included in "Natural Gas Distribution" and "Integrated Companies" under Z16.1 data.
b. Includes "Manufactured and Mixed Gas" and "Liquefied Petroleum Gas."
c. Frequency Rate is number of disabling injuries per million man-hours worked for each injury resulting in a minimum of one day's loss of time.
d. Severity Rate is number of days lost due to disabling injuries, per million man-hours worked.
e. Not available under Z16.1 data.
f. Includes "Manufactured and Mixed Gas."
g. Includes "Manufactured and Mixed Gas" and "Liquefied Petroleum Gas."
h. Incident Rate is total injuries per 100 full-time employees.
i. Severity Rate is average lost workdays per injury.
NOTE: Companies are now required to report under the Occupational Safety and Health Act (OSHA) instead of ANST Standard Z16.1.
Source: A.G.A. *Disabling Injury Experience*, 1987.

APPENDIX A
GLOSSARY

(This is an abbreviated list of gas utility industry definitions. A complete list is contained in the *Glossary for the Gas Industry*).

Accident Frequency Rate: See Injury Frequency Rate, Disabling.

Accident Incident Rate: See Injury Incident Rate.

Accident Severity Rate: See Injury Severity Rate, Disabling.

Additions (To Utility Plant):

Gross Additions: Cost of construction, generally including overhead and allowance for funds used during construction (interest during construction), cost of land, land rights, and mineral interests, gas capitalized in underground storage, used facilities acquired, and the purchase cost of an acquired operating unit or systems of utility plant. See Construction Expenditures.

Net Additions: Gross additions less retirements and adjustments of utility plant. It is the net change in utility plant between two dates.

Anthracite: A hard coal containing little volatile matter, low ash and generally having a heating value of 11,000–12,000 Btu/lb.

Associated Natural Gas: See Gas, Natural.

Associated Number of Customers: See Customers, Average Number of.

Average Revenue Per Unit of Gas Sales (By Class of Service): Revenue from the sale of gas to a class of service, exclusive of forfeited discounts and penalties, divided by the corresponding number of units sold. Units may be therms, Btu's, or cubic feet.

Barrel (Oil): A volumetric unit of measurement equivalent to 42 U.S. standard gallons.

Bcf: 1,000,000,000 cubic feet; Billion cubic feet.

Bituminous Coal: Ranking of soft coal generally having a heating value of 11,000–13,000 Btu/lb., high in volatile matter and ash.

Blue Gas: See Water Gas.

Boiler Fuel Gas: Natural gas used as a fuel for the generation of steam (or hot water).

Bottled Gas: In the industry, liquefied petroleum gas contained under moderate pressure in cylinders, sometimes referred to as bottles. Usually propane and/or butane.

Capacity, Effective: The maximum load which a machine, apparatus, device, plant or system is capable of carrying under existing service conditions.

Carbon Black: Almost pure amorphous carbon consisting of extremely fine particles, usually produced from gaseous or liquid hydrocarbons by controlled combustion with a restricted air supply or by thermal decomposition.

Casinghead Gas: Unprocessed natural gas containing gasoline vapors produced from a reservoir containing oil.

City Gate (Town Border Station): See Gate Station.

Class of Service: Defines the type of customer. The common classes of service applied to ultimate consumers, and considerably more completely described in the A.G.A. publication "Definitions of a Gas Customer and Classes of Service for Industry Reporting Purposes" are:

1. **Residential Service**
   Covers service to customers for domestic purposes (single, multifamily or mobile homes, etc.). In residential service, the number of housing units within a structure determines the customer classification.
2. **Commercial Service**
   Covers service to customers engaged in wholesale or retail trade, agriculture, communications, finance, fisheries, forestry, government, insurance, real estate, transportation, etc., and to customers not directly involved in other classes of service.
3. **Industrial Service**
   Covers service to customers engaged primarily in a process which either involves the extraction of raw materials from the earth, or a change of raw or unfinished materials into another form or product.
4. **Other Services**
   Service to municipalities or divisions (agencies) of State or Federal Governments under special contracts or agreements or service classifications, which are applicable only to public authorities using gas for general or institutional purposes. (Exclude sales properly included under items 2 or 3 above, such as manufacturing arsenals or publicly-owned power systems).
5. **Sales for Resale** (Uniform System of Accounts, 483)
   Service to other utility companies, governmental agencies (municipal, county, state or federal), rural cooperatives, etc., for distribution and resale to ultimate customers. Service to other utilities for use by them and not for distribution and resale, is to be classified as residential, commercial, or industrial, depending upon the primary business or economic activity.

Coal Gas: Manufactured gas made by distillation or carbonization of coal in a closed coal gas retort, coke oven, or other vessel.

Combination Gas Utility: Utility which supplies both gas and some other utility service (electricity, water, etc.). For purposes of A.G.A. statistics, a combination utility derives at least 5 percent but less than 95 percent of its total sales revenues from gas operations. See Appendix C for a partial list of combination companies.

Commercial Service: See Class of Service.

Communities (Served): A community is a contiguous built-up area, incorporated or unincorporated, commonly recognized as a separate entity. Any incorporated area and its adjacent built-up unincorporated area may be counted as one community.

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British Thermal Unit (Btu): The quantity of heat that must be added to one pound of water to raise its temperature one degree Fahrenheit from 58.5 to 59.5 degrees Fahrenheit under standard pressure of 30 inches of mercury.

By-Products (Residuals): Secondary products which are obtained from the processing of a raw material and have commercial value. They may be the residues of the gas production process, such as coke, tar, and ammonia, or they may be the result of further processing of such residues, such as ammonium sulphate.

Compressor Horsepower: See Horsepower, Compressor.

Compressor Station: Any permanent combination of facilities which supplies the energy to move gas at increased pressure from fields, in transmission lines or into storage. For reporting to A.G.A. include field (other than temporary) line, and storage compressor stations of producing and transmission companies; distribution companies should include underground storage compressor stations and stations used for transporting gas between local distribution systems but not booster or pumping stations used within a local distribution system.

Condensate: The liquid resulting when a vapor is subjected to cooling and pressure reduction. Also, liquid hydrocarbons condensed from gas and oil wells. Compare Liquids, Natural Gas.

Construction Expenditures: Cost of construction, including overheads and allowance for funds used during construction, for additions to, renewals, and replacements of plant facilities, but excluding the purchase cost of an acquired operating unit or system of utility plant, accounting transfers and adjustments to utility plant, and cost to remove plant facilities from service.

Conversion to Natural Gas: Changing the gas service to ultimate customers from a fuel other than natural gas to natural gas, including adjustment of consumers' appliances to perform satisfactorily with natural gas. Natural gas does not necessarily mean straight natural gas; stabilizing the heat content of the sendout gas by diluent gases or enriching gases is not considered to change the basic character of natural gas. For the purpose of uniform reporting a company should be considered a natural gas company when 95 percent of the system has been converted.

Cubic Foot: The most common unit of measurement of gas volume. It is the amount of gas required to fill a volume of one cubic foot under stated conditions of temperature, pressure, and water vapor.

Current Gas: See Storage, Underground.

Cushion Gas: The gas required in a depleted reservoir, used for storage of natural gas, so that reservoir pressure is such that the storage gas may be recovered.

Customer: An individual, firm or organization which purchases service at one location under one rate classification, contract, or rate schedule. If service is supplied at more than one location or under more than one rate schedule, each location and rate schedule shall be counted as a separate customer unless the consumption of the several locations is combined before billing and billed on one rate schedule.

Customers, Average Number of: The average number of customers is determined by summing the customers for each of the periods involved and dividing by the number of periods. See Customer.

Customers, End of Year: The number of customers at December (or the last month of a fiscal year) including all billing cycles. See Customers, Average Number of.

Degree Day, Heating: A measure of the coldness of the weather experienced, based on the extent to which the daily mean temperature falls below a reference temperature, usually 65°F. For example, on a day when the mean outdoor dry-bulb temperature is 35°F., there would be 30 degree days experienced. A daily mean temperature usually represents the sum of the high and low readings divided by two.

Degree Day Normal: The simple arithmetic average of monthly or annual degree days (usually for a 30-year period). May be a simple degree day normal or population-weighted degree day normal.

Demand: The rate at which gas is delivered to or by a system, part of a system, or a piece of equipment, expressed in cubic feet or therms or multiples thereof, for a designated period of time called the demand interval. Compare Load.

Design Day: A 24-hour period of demand which is used as a basis for planning gas capacity requirements.

Design Day Availability: The amount of each type of gas arranged to be available on the design day and the maximum combination of such supplies. (In the case of purchased natural gas, the maximum day allocation, maximum day contract quantity, or FERC authorization).

Design Day Temperature: The mean temperature assumed for the Design Day.

Dissolved Natural Gas: See Gas, Natural.

Distribution Company, Gas: Company which obtains the major portion of its gas operating revenues from the operation of a retail gas distribution system, and which operates no transmission system other than incidental connections within its own system or to the system of another company. For purposes of A.G.A. statistics, a distribution company obtains at least 90 percent of its gas operating revenues from sales to ultimate customers *and* classifies at least 90 percent of mains (other than service pipe) as distribution. Compare Integrated Company, Gas; Transmission Company, Gas. See Appendix C for a partial list of Distribution Companies.

Distribution Mains: See System Type.

Distribution System, Gas: See System Type.

Dry Natural Gas: See Gas, Natural.

Enriching: Increasing the heat content of a gas by mixing with it a gas of higher Btu content.

Exchange Gas: Gas that is received from (or delivered to) another party in exchange for gas delivered to (or received from) such other party.

Extraneous Gas: See Storage, Underground.

Field Pipeline: See System Type.

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Firm Service: Service offered to customers (regardless of Class of Services) under schedules or contracts which anticipate no interruptions. The period of service may be for only a specified part of the year as in Off-Peak Service. Certain firm service contracts may contain clauses which permit unexpected interruption in case the supply to residential customers is threatened during an emergency. Compare Interruptible Service; and Off-Peak Service.

Foreign Gas: See Storage, Underground.

Gallon: A unit of liquid measure. The U.S. gallon contains 231 cubic inches or 8.3359 pounds avoirdupois of distilled water at its maximum density and with the barometer at 30 inches.

Gas, Dry: See Gas, Natural.

Gas, Liquefied Petroleum (LPG): A gas containing certain specific hydrocarbons which are gaseous under normal atmospheric conditions but can be liquefied under moderate pressure at normal temperatures. Propane and butane are the principal examples.

Gas, Manufactured: A gas obtained by destructive distillation of coal, or by the thermal decomposition of oil, or by the reaction of steam passing through a bed of heated coal or coke or catalyst beds. Examples are coal gases, coke oven gases, producer gas, blast furnace gas, blue (water) gas, and carbureted water gas. Btu content varies widely.

Gas, Natural: A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in porous geologic formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane.

Associated: Free natural gas in immediate contact, but not in solution with crude oil in the reservoir.

Dissolved: Natural gas in solution in crude oil in the reservoir.

Dry: Gas whose water content has been reduced by a dehydration process. Gas containing little or no hydrocarbons commercially recoverable as liquid product. Specified small quantities of liquids are permitted by varying statutory definition in certain states.

Liquefied (LNG): Natural gas which has been liquefied by reducing its temperature to minus 260°F at atmospheric pressure. It remains a liquid at −116°F and 673 psig. In volume it occupies 1/600 of that of the vapor.

Liquids: Those liquid hydrocarbon mixtures which are gaseous at reservoir temperatures and pressures but are recoverable by condensation or absorption. Natural gasoline and liquefied petroleum gases fall in this category.

Non-Associated: Free natural gas not in contact with, nor dissolved in, crude oil in the reservoir.

Sour: Gas found in its natural state, containing such amount of compounds of sulphur as to make it impractical to use, without purifying, because of its corrosive effect on piping and equipment.

Substitute: A gas manufactured from carbonaceous material whose characteristics are substantially interchangeable with natural gas. The resultant gas is composed primarily of methane. At this writing, SNG feedstocks are the light hydrocarbons, propane, butane and the naphthas. Development is underway of processes for production from heavier feedstocks, coal, peat and solid wastes.

Sweet: Gas found in its natural state, containing such small amount of compounds of sulphur that it can be used without purifying, with no deleterious effect on piping and equipment.

Wet: Wet natural gas is unprocessed natural gas or partially processed natural gas produced from strata containing condensable hydrocarbons. The term is subject to varying legal definitions as specified by certain state statutes.

Gas, Oil: A gas resulting from the thermal decomposition of petroleum oils, composed mainly of volatile hydrocarbons and hydrogen. The true heating value of oil gas may vary between 800 and 1600 Btu per cubic foot depending on the operating conditions and feedstock properties.

Gas, Substitute Natural (SNG): See Gas, Natural.

Gas Transported for Others: That volume of gas owned by another company received into and transported through any part of the transmission system under a transportation tariff.

Gate Station: Generally, a location at which gas changes ownership, from one party to another, neither of which is the ultimate consumer. It should be noted, however, that the gas may change from one system to another at this point without changing ownership. Also referred to as city gate station, town border station, or delivery point.

Gathering Pipeline: See System Type.

Heating Value: The amount of heat produced by the complete combustion of a unit quantity of fuel. The gross or higher heating value is that which is obtained when all of the products of combustion are cooled to the temperature existing before combustion, the water vapor formed during combustion is condensed, and all the necessary corrections have been made. The net or lower heating value is obtained by subtracting the latent heat of vaporization of the water vapor formed by the combustion of the hydrogen in the fuel, from the gross or higher heating value.

Holder, Gas: A gas-tight receptacle or container in which gas is stored for future use. (1) at approximately constant pressure (low pressure containers) in which case the volume of the container changes; and (2) in containers of constant volume (usually high pressure containers) in which case the quantity of gas stored varies with the pressure.

Holding Company: A gas holding company is a corporation that is formed for the purpose of owning stock in other gas companies.

Horsepower, Compressor: The horsepower rating on the nameplate.

Horsepower, (HP): A unit of power; equivalent to 33,000 foot-pounds per minute, or 550 foot-pounds per second (mechanical horsepower), or 0.746 kilowatts.

Hydrocarbon: A chemical compound composed solely of hydrogen and carbon. The compounds having a small number of carbon and hydrogen atoms in their molecule are usually gaseous; those with a larger number of atoms are liquid, and the compounds with the largest number of atoms are solid.

Industrial Service: See Class of Service.

Injury Frequency Rate, Disabling: Number of disabling injuries per million man-hours worked. Such injuries include disabilities and fatalities arising out of and occurring during the course of employment. A disabling injury is one which renders the employee unable to return to work on one or more days after the injury.

Injury Incident Rate: Number of injuries per 100 full-time employees.

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Injury Severity Rate, Disabling: Number of days lost due to disabling per million manhours worked, including appropriate time charges according to a predetermined schedule for permanent disability cases and/or fatalities. Subsequent to 1976, severity rate is average lost workdays per injury.

Integrated Company, Gas: A company which obtains a significant portion of its gas operating revenues from the operations of both a retail gas distribution system and gas transmission system. For purposes of A.G.A. statistics, an integrated company obtains less than 90 percent but more than 10 percent of its gas operating revenues from either its retail or transmission operations or does not meet the classification of mains established for distribution or transmission companies. Compare Distribution Company, Gas; Transmission Company, Gas. See Appendix C for a partial list of Integrated Companies.

Interruptible Service: Low priority service offered to customers under schedules or contracts which anticipate and permit interruption on short notice, generally in peak-load seasons, by reason of the claim of firm service customers and higher priority users. Unlike Off-Peak Service, gas is available at any time of the year if the supply is sufficient.

Line Pack, Gas Delivered from: That volume of gas delivered to the markets supplied by the net change in pressure in the regular system of mains, transmission and/or distribution. For example, the change in the content of a pipeline brought about by the deviation from steady flow condition.

Liquefied Natural Gas (LNG): See Gas, Natural.

Liquefied Petroleum Gas (LPG): See Gas, Liquefied Petroleum.

Load: The amount of gas delivered or required at any specified point or points on a system; load originates primarily at the gas consuming equipment of the customers. Also, to load a pressure regulator is to set the regulator to maintain a given pressure as the rate of gas flow through the regulator varies. Compare Demand.

Local Storage: See Storage, Local.

Mcf: 1,000 cubic feet; Thousand cubic feet.

MMBtu: 1,000,000 Btu; Million Btu.

MMcf: 1,000,000 cubic feet; Million cubic feet.

Main: A distribution line that serves as a common source of supply for more than one gas service line.

Distribution Mains: See System Type.
Field and Gathering Pipeline: See System Type.
Transmission Pipeline: See System Type.

Manufactured Gas: See Gas, Manufactured.

Marketable Natural Gas: Raw gas from which certain hydrocarbons and non-hydrocarbon compounds have been removed by processing. Marketable natural gas is often referred to as pipeline gas, residue gas, or sales gas.

Maximum Day:
Allocation: See Design Day Availability.
Sendout: See Sendout, Maximum Day.

Minimum Day: See Sendout, Minimum Day.

Naphtha: Any of various volatile, often flammable liquid hydrocarbon mixtures used chiefly as solvents and diluents and as raw materials for conversion to gasoline and substitute natural gas (SNG).

Native Base Gas: See Storage, Underground.

Natural Gas: See Gas, Natural.

Natural Gas, Associated: See Gas, Natural.

Natural Gas, Dissolved: See Gas, Natural.

Natural Gas, Dry: See Gas, Natural.

Natural Gas, Liquefied: See Gas, Natural.

Natural Gas Liquids: See Gas, Natural.

Natural Gas, Non-Associated: See Gas, Natural.

Natural Gas Reserves: See Reserves.

Natural Gas, Sour: See Gas, Natural.

Natural Gas, Sweet: See Gas, Natural.

Natural Gas, Wet: See Gas, Natural.

Natural Gasoline: Liquid removed from natural gas by absorption or refrigeration and containing hydrocarbons heavier than butane.

Off-Peak Service: Service made available on special schedules or contracts but only for a specified part of the year during the off-peak season. Compare Interruptible Service.

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Oil Gas: See Gas, Oil.

Oil, Heavy: Heavy, thick and viscous oils. Usually refinery residuals commonly specified as grades 5 and 6.

Oil, Light: Generally, all oils lighter than residual fuel oils No. 5 and No. 6. Oils that have a low specific gravity, usually products of controlled distillation of crude oil but also including by-product benzol and toluol.

Peak Day: The 24-hour day period of greatest total gas sendout. Compare Design Day.

Peak Shaving: Supplying fuel gas for distribution system from an auxiliary source (of limited supply and higher cost) during periods of maximum demand when the primary source is not adequate.

Pipeline: All parts of those physical facilities through which gas is moved in transportation, including pipe, valves and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders and fabricated assemblies. See System Type.

Pressure, Absolute: Pressure above that of a perfect vacuum. It is the sum of gauge pressure and atmospheric pressure.

Pressure, Gauge (psig): Pounds per square inch above atmospheric pressure.

Producer Gas (Also, Manufactured Gas): A combustible gas made in a furnace or apparatus by circulating air or a mixture of air and steam through a layer of incandescent material consisting chiefly of carbon monoxide, hydrogen and nitrogen.

Propane (C_3H_8): A gaseous member of the paraffin series of hydrocarbons, which when liquified under pressure is one of the components of liquefied petroleum (LP) gas. Contains approximately 2,500 Btu per cubic foot (at 60°F and 30″ mercury, and 91,740 Btu per gallon).

Recoverable Natural Gas Reserves: See Reserves, Recoverable Natural Gas.

Refinery Gas: See Gas, Oil.

Reforming: A chemical process using heat in presence of a catalyst to break down a substance into desired components, such as in the reforming of natural gas or light oils into lower Btu fuel gas.

Repressuring: Forcing gas, under pressure, into the oil reservoir in an attempt to increase the recovery of crude oil; also done with water.

Resale Service: See Class of Service, Sales for Resale.

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Reserves, Energy: Refers to the bank of natural resources, such as natural gas, natural gas liquids, petroleum, coal, lignite, and energy available from water power, and solar and geothermal energy.

Estimated Potential Natural Gas Reserves: Refers to an estimate of the ultimate finding of natural gas in a specified area, whether or not presently considered proved or recoverable.

Estimated Proved Natural Gas Reserves: An estimated quantity of natural gas which analysis of geologic and engineering data demonstrates with reasonable certainty to be recoverable in the future from known oil and gas reservoirs, under existing economic and operating conditions. Reservoirs that have demonstrated the ability to produce by either actual production or conclusive formation test are considered proved.

Saturation, Appliance or Customer: The number of specified appliances, or users, divided by the basic units or total potential of the universe involved, i.e., Gas Heating Saturation related to customers is the total number of customers with space heating divided by the total number of customers. Saturation should not be used alone but should be associated with customers, families, households, population or other qualifying terms indicating the universe referred to. For industry statistics, saturation based on customers served is used.

Sendout, Gas: Total gas produced, purchased (including exchange gas receipts), or net withdrawn from underground storage within a specified time interval, measured at the point(s) of production and/or purchase, and/or withdrawal, adjusted for changes in local storage quantity. It comprises gas sales, exchange deliveries, gas used by company and unaccounted for gas. Expressed in various units such as therms, Btu's, cubic feet, etc.

Sendout, Maximum Day: The greatest actual total gas sendout occurring in a specified 24-hour period. Compare Design Day; Peak Day.

Sendout, Minimum Day: The smallest actual total gas sendout occurring in a specified 24-hour period.

Service (Service Line, Service Pipe): The pipe which carries gas from the main to the customer's meter. Compare Class of Service.

Shrinkage, Natural Gas: The reduction is volume of wet natural gas due to the extraction of some of its constituents, such as hydrocarbon products, hydrogen sulfide, carbon dioxide, nitrogen, helium, and water vapor.

Storage, Buried Pipe (Bottle-Type Holder): A system of storage in especially designed high pressure pipe sections or bottles capable of storing natural gas at pressures near or equal to the pressure of maximum super-compressibility. Not storage in ordinary steel pipe.

Storage, Local: The storage facilities, other than underground storage, that are an integral part of a distribution system, i.e., on the distribution side of the city gate, whether for manufactured, mixed, natural, liquefied petroleum, or liquefied natural gases.

Storage Mains: Those mains used primarily for injection and withdrawal of gas to and from underground storage.

Storage, Underground: The utilization of subsurface facilities for storing gas which has been transferred from its original location for the primary purposes of load balancing. The facilities are usually natural geological reservoirs such as depleted oil or gas fields or waterbearing sands sealed on the top by an impermeable cap rock. The facilities also may be manmade or natural caverns.

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Aquifer Storage: The storage of gas underground in porous and permeable rock stratum, the pore space of which was originally filled with water and in which the stored gas is confined by suitable structure, permeability barriers and hydrostatic water pressure.

Base Gas (Also called cushion gas): The total volume of gas which will maintain the required rate of delivery during an output cycle.

Current Gas: The total volume of gas in a storage reservoir which is in excess of the base gas. Also called Working Gas.

Extraneous Gas: See Stored Gas, this section.

Foreign Gas: See Stored Gas, this section.

Native Gas: The total volume of gas indigenous to the storage reservoir.

Storage Reservoir: That part of the storage zone having a defined limit of porosity and/or permeability which can effectively accept, retain, and deliver gas.

Storage Well: A cased bore hole, extending from the surface into the storage zone, which is used primarily for gas input and/or output purposes.

Stored Gas: Gas physically injected into a storage reservoir.

Ultimate Reservoir Capacity: The total estimated volume of gas that could be contained in storage reservoir when it is developed to the maximum design pressure.

Working Gas: Gas in an underground storage field that is available for market. May also be called Current Gas.

Straight Gas Utility: Company which derives the major portion of its total operating revenues from gas operations. For purposes of A.G.A. statistics, a straight gas utility derives at least 95 percent of its total operating revenues from gas operations. See Combination Gas Utility.

Subbituminous Coal: Ranking of soft coal generally having a heating value of 8,300–13,000 Btu's/lb-high volatile matter and ash.

Substitute Natural Gas: See Gas, Natural.

System Type:

Distribution: Generally mains, services, and equipment which carry or control the supply of gas from the point of local supply to and including the sales meters. The system operates at various pressures as indicated below.

High Pressure: A system which operates at a pressure higher than the standard service pressure delivered to the customer; thus, a pressure regulator is required on each service to control pressure delivered to the customer. Sometimes this is referred to as medium pressure.

Low Pressure or Utilization Pressure: A system in which the gas pressure in the mains and service lines is substantially the same as that delivered to the customers' appliances; ordinarily a pressure regulator is not required on individual service lines.

Field and Gathering: A network of pipelines (mains) transporting natural gas from individual wells to compressor station, processing point, or main trunk pipeline.

Main: The network of distribution piping to which customers' service lines are attached. Generally large pipes are laid in principal streets with smaller laterals extending along side streets and connected at their ends to form a grid; sometimes laterals are brought to dead ends. Compare with Distribution, this section.

Transmission: Pipelines (Mains) installed for the purpose of transmitting gas from a source or sources of supply to one or more distribution centers, or to one or more large volume customers, or a pipeline installed to interconnect sources of supply. In typical cases transmission lines differ from gas mains in that they operate at higher pressures, are longer, and the distance between connections is greater.

Tcf: 1,000,000,000,000 cubic feet; Trillion cubic feet.

Therm: A unit of heating value equivalent to 100,000 British thermal units (Btu).

Transmission Company, Gas: A company which obtains at least 90 percent of its gas operating revenues from sales for resale and/or transportation of gas for others and/or main line sales to industrial customers *and* classifies at least 90 percent of mains (other than service pipe) as field and gathering, storage and/or transmission. Compare Distribution Company, Gas; Integrated Company, Gas. See Appendix C for a partial list of Transmission companies.

Transmission Pipeline: See System Type.

Transmission System: See System Type.

Transportation Volumes to End-Users: Volumes of gas owned by the ultimate consumer (end-user) and delivered to the ultimate consumer's meter by the transporter.

Ultimate Customer: The customer who purchases gas for consumption and not for resale purposes.

Ultimate Reservoir Capacity: See Storage, Underground.

Unaccounted for Gas: The difference between the total gas available from all sources and the total gas accounted for as sales, net interchange and company use. This difference includes leakage or other actual losses, discrepancies due to meter inaccuracies, variations of temperature and/or pressure, other variants, particularly due to measurements being made at different times. In cycle billings, an amount of gas supply used but not billed as of the end of a period. Compare Sendout, Gas.

Underground Storage: See Storage, Underground.

Water Gas (Blue Gas): Made by passing steam over hot coke or other carbonaceous material; it consists of carbon monoxide and hydrogen with varying amounts of carbon dioxide and nitrogen. It burns with a blue flame.

Well, Wildcat: An exploratory well being drilled in unproven territory, that is, in a horizon from which there is no production in the general area.

Wet Natural Gas: See Gas, Natural.

Working Gas: See Storage, Underground.

APPENDIX B
CONVERSION TABLE

The following are some frequently used units of measure and natural gas equivalents in British thermal units (Btu). Read "=" as "contains" between volumes and energy units.

The national average Btu content per cubic foot is used. For state averages, see page 76.

1 Cubic Foot (cf) = 0.02832 Cubic Meters = 1,026.9 Btu
1 Therm = 100,000 Btu ≃ 25,200 Kilocalories ≃ 100 Cubic Feet
1 Mcf = 1,000 Cubic Feet = 28.32 Cubic Meters = 1,026,900 Btu
1 M Therm = 100,000,000 Btu ≃ 25,200,000 Kilocalories
1 MMcf = 1,000,000 Cubic Feet = 1,026,900,000 Btu

Conversion examples:
(1) To convert 2,325 MMcf to trillions of Btu:
    (2,325 MMcf) (1,026,900,000 Btu/MMcf)
        = 2,387,542,500,000 Btu
        ≃ 2.3875 trillion Btu
(2) To convert 5,000 trillion Btu to millions of cubic feet:
    (5,000 trillion Btu) (1 cf/1,026.9 Btu)
        ≃ 4.869 trillion cf (Tcf)
        ≃ 4,869,023 MMcf
(2) To convert 22,150 million therms to trillions of Btu:
    (22,150 million therms) (100,000 Btu/therm)
        = 2,215,000,000 million Btu
        = 2,215 trillion Btu
(4) To convert the Btu content of 1 cubic foot at 15.05 psia to 14.73 psia:
    (1,049 Btu/cf) (14.73 psia/15.05 psia)
        ≃ 1,026.7 Btu/cf

For comparative purposes, Btu contents of various energy sources other than natural gas are shown below.*

Fuel Oil (barrel)	
Distillate	5,825,000 Btu
Residual	6,287,000 Btu
Coal (short ton)	
Bituminous and lignite	21,531,000 Btu
Anthracite	21,657,000 Btu
Electricity (kilowatt-hour)	3,412 Btu
Natural gas liquids (barrel)	3,804,000 Btu

* Department of Energy, Energy Information Administration, *Monthly Energy Review,* April 1988.

APPENDIX C
COMPANY LISTINGS

Shown below are 100 selected companies, 25 for each company type, as used in the financial and other sections of this publication. These lists are *not* meant to be *comprehensive*. Inclusion on this list does not imply individual company data may be released.

Distribution

Alabama Gas Corporation
Berkshire Gas Company, The
Boston Gas Company
Brooklyn Union Gas Company, The
Chattanooga Gas Company
Columbia Gas of Kentucky, Inc.
Columbia Gas of Ohio, Inc.
Columbia Gas of Pennsylvania, Inc.
Commonwealth Gas Company
Elizabethtown Gas Company
ENTEX, Inc.
Great Falls Gas Company
Minnegasco, Inc.
Mississippi Valley Gas Company
New Jersey Natural Gas Company
North Shore Gas Company
Northwest Natural Gas Company
Peoples Gas System, Inc.
Providence Gas Company
Richmond Gas Corporation
Southern Connecticut Gas Company, The
Washington Gas Light Company
Washington Natural Gas Company
Wisconsin Gas Company
Wisconsin Natural Gas Company

Transmission

Alabama Tennessee Natural Gas Co.
Algonquin Gas Transmission Company
ANR Pipeline Company
Colorado Interstate Gas Company
Columbia Gas Transmission Corporation
Columbia Gulf Transmission Company
East Tennessee Natural Gas Company
El Paso Natural Gas Company
Great Lakes Transmission Company
Houston Natural Gas Corporation
Midwestern Gas Transmission Company
Natural Gas Pipeline Co. of America
Northwest Pipeline Corporation
Pacific Gas Transmission Company
Panhandle Eastern Pipe Line Company
Southern Natural Gas Company
Texas Eastern Transmission Corporation
Texas Gas Transmission Corporation
Transcontinental Gas Pipe Line Corp.
Transok Pipe Line Company
Transwestern Pipeline Company
Trunkline Gas Company
United Gas Pipeline Company
Valero Transmission Company
Western Gas Supply Company

Integrated

Arkansas Louisiana Gas Company
Arkansas Oklahoma Gas Corporation
Arkansas Western Gas Company
Associated Natural Gas Company
Battle Creek Gas Company
Corning Natural Gas Company
East Ohio Gas Company, The
Enserch Corporation
Intermountain Gas Company
KN Energy, Inc.
Michigan Consolidated Gas Company
Michigan Gas Utilities Company
National Fuel Gas Company
National Gas & Oil Corporation
North Carolina Natural Gas Corporation
North Penn Gas Company
Ohio Valley Gas Corporation
Oklahoma Natural Gas Company
Peoples Natural Gas Co., The
Public Service Company of North Carolina, Inc.
Rio Grande Valley Gas Company
Southern California Gas Company
Terre Haute Gas Corporation
Vermont Gas Systems, Inc.
Western Kentucky Gas Company

Combination

Baltimore Gas and Electric Company
Central Illinois Light Company
Cincinnati Gas and Electric Company
Consolidated Edison Co. of NY Inc.
Consumers Power Company
Dayton Power & Light Company
Florida Public Utilities Company
Illinois Power Company
Iowa Electric Light & Power Company
Iowa-Illinois Gas & Electric Company
KPL Gas Service
Long Island Lighting Company
Louisville Gas & Electric Company
Madison Gas & Electric Company
Montana-Dakota Utilities Company
Montana Power Company
Niagara-Mohawk Power Corporation
Northern Indiana Public Service Company
Pacific Gas & Electric Company
Philadelphia Electric Company
Public Service Co. of Colorado
Public Service Electric & Gas Company
San Diego Gas & Electric Company
Washington Water Power Company
Wisconsin Public Service Corporation

APPENDIX D
GAS REQUIREMENTS COMMITTEE, NATURAL GAS CONSUMPTION

The Gas Requirements Committee (GRC) is a subcommittee of the Gas Demand Committee, a board-level committee of the American Gas Association. The GRC has been publishing reports on gas consumption since 1964, and is considered one of the three major sources of comprehensive data on natural gas consumption. The Energy Information Agency (EIA) within the U.S. Department of Energy and the American Gas Association are the other two. The Statistics and Related Economics Committee of the A.G.A. has decided to include the GRC data on natural gas consumption in this edition as part of the effort to continually improve the usefulness of the data provided in *Gas Facts*.

Comparison of consumption figures published by the three above-mentioned sources for any given year would result in some discrepancies. Certainly one reasonable explanation is that the three groups use different methods in the collection and compilation of natural gas consumption data. The major differences are caused by varying definitions, sample sizes, and points of measurement.

The GRC measure of consumption is defined as adding together the end-use consumption of all gas users including company use, unaccounted for gas and field use on a national basis only. The EIA measure of consumption is defined as the sum of deliveries to consumers, lease and plant fuel, and pipeline fuel. The A.G.A. measure of consumption is restricted to sales to consumers that are made by gas utility companies *only* and, therefore, is a subset of total United States gas consumption.

It is not the intention of the Statistics and Related Economics Committee to reconcile the differences among the reported consumption data. Rather, the reader should be aware that three sources of data exist. If the reader wishes to further analyze the GRC or EIA consumption data, it is reported in the GRC *Future Gas Consumption in the United States* reports or the EIA *Natural Gas Annual* reports.

The subsequent pages excerpt the following information from GRC publications: United States gas consumption by state, region and class of service—1986, total commercial and industrial consumption by standard industrial classification—1986, and United States gas consumption by class of service, 1975–1986.

1986
UNITED STATES GAS CONSUMPTION BY STATE, REGION & CLASS OF SERVICE

(Millions of Cubic Feet)[a]

		Firm			
	Region and State	Residential	Commercial	Industrial	Electric Utilities
(1)	**United States Total**				
(2)	**Field Use**				
(3)	**Total Excluding Field Use**	**4,427,780**	**2,190,161**	**3,414,110**	**1,623,445**
(4)	**1. New England**	**155,562**	**80,405**	**29,086**	**113**
(5)	Connecticut	34,957	17,926	8,886	0
(6)	Maine	542	1,214	631	0
(7)	Massachusetts	97,414	50,145	16,342	113
(8)	New Hampshire	4,914	4,519	531	0
(9)	Rhode Island	16,115	5,476	2,564	0
(10)	Vermont	1,620	1,125	132	0
(11)	**2. Appalachian**	**1,365,479**	**566,260**	**464,195**	**2,054**
(12)	Delaware	6,201	2,906	3,337	35
(13)	District of Columbia	17,924	6,254	442	0
(14)	Kentucky	61,350	30,147	27,196	374
(15)	Maryland	75,110	15,724	25,063	105
(16)	New Jersey	168,255	80,177	29,743	0
(17)	New York	345,927	136,132	62,916	1,085
(18)	Ohio	337,708	143,063	139,834	218
(19)	Pennsylvania	260,400	109,533	128,199	237
(20)	Virginia	54,292	25,528	29,583	0
(21)	West Virginia	38,312	16,796	17,882	0
(22)	**3. Southeast**	**257,696**	**164,750**	**186,399**	**40,777**
(23)	Alabama	50,075	21,194	44,057	506
(24)	Florida	15,618	27,268	9,973	39,144
(25)	Georgia	91,142	41,271	22,224	0
(26)	North Carolina	31,002	23,456	55,727	1,122
(27)	South Carolina	25,330	9,350	10,784	5
(28)	Tennessee	44,529	42,211	43,634	0
(29)	**4. Great Lakes**	**1,041,653**	**504,968**	**469,988**	**13,110**
(30)	Illinois	452,953	213,723	219,871	3,982
(31)	Indiana	144,886	66,178	96,655	908
(32)	Michigan	330,759	160,038	122,030	8,168
(33)	Wisconsin	113,055	65,029	31,432	52
(34)	**5. Northern Plains**	**236,904**	**133,454**	**78,868**	**732**
(35)	Iowa	72,366	37,831	58,569	495
(36)	Minnesota	102,623	52,210	11,960	134
(37)	Nebraska	41,695	29,576	4,398	102
(38)	North Dakota	9,352	7,168	2,973	1
(39)	South Dakota	10,868	6,669	968	0
(40)	**6. Mid-Continent**	**268,751**	**120,207**	**128,474**	**222,550**
(41)	Kansas	79,563	32,523	29,197	7,405
(42)	Missouri	121,533	49,098	20,891	0
(43)	Oklahoma	67,655	38,586	78,386	215,145
(44)	**7. Gulf Coast**	**336,658**	**235,801**	**1,822,103**	**1,270,393**
(45)	Arkansas	40,923	20,931	73,133	27,528
(46)	Louisiana	61,354	29,177	779,883	191,665
(47)	Mississippi	31,721	16,024	41,079	21,301
(48)	Texas	202,660	169,669	928,008	1,029,899
(49)	**8. Rocky Mountain**	**150,913**	**94,030**	**29,188**	**2,340**
(50)	Colorado	78,910	54,980	16,028	2,259
(51)	Montana	16,703	11,844	1,373	81
(52)	Utah	44,745	18,734	4,514	0
(53)	Wyoming	10,555	8,472	7,273	0
(54)	**9. Pacific Southwest**	**543,152**	**220,678**	**105,778**	**55,806**
(55)	Arizona	25,466	25,386	21,006	27,337
(56)	California	479,439	166,330	67,133	15,155
(57)	Nevada	14,104	7,678	5,943	4,019
(58)	New Mexico	24,143	21,284	11,696	9,295
(59)	**10. Pacific Northwest**	**58,345**	**48,699**	**43,335**	**11**
(60)	Idaho	7,863	8,874	16,992	0
(61)	Oregon	19,424	16,548	9,301	0
(62)	Washington	31,058	23,277	17,042	11
(63)	**11. Pacific**	**12,667**	**20,909**	**56,696**	**15,559**
(64)	Alaska	12,091	18,648	56,696	15,559
(65)	Hawaii	576	2,261	0	0

a. Btu content equals 1,000 Btu per cubic foot.

APPENDIX D

1986 (Continued)
UNITED STATES GAS CONSUMPTION BY STATE, REGION & CLASS OF SERVICE

(Millions of Cubic Feet)[a]

Interruptible					
Commercial	Industrial	Electric Utilities	Other	Total Consumption	
				17,351,076	**(1)**
				972,000	**(2)**
324,072	**2,049,168**	**1,238,241**	**1,112,099**	**16,379,076**	**(3)**
11,669	**17,609**	**15,569**	**11,664**	**321,677**	**(4)**
7,236	8,581	641	1,977	80,204	(5)
0	79	0	129	2,595	(6)
2,918	6,940	14,918	7,607	196,397	(7)
0	366	0	514	10,844	(8)
1,265	793	10	1,217	27,440	(9)
250	850	0	220	4,197	(10)
66,985	**329,276**	**185,973**	**181,764**	**3,161,986**	**(11)**
54	3,418	0	0	15,951	(12)
5,520	164	0	933	31,237	(13)
1,496	23,644	15	22,784	167,006	(14)
8,319	31,660	2,270	10,071	168,322	(15)
7,221	45,861	37,946	14,795	383,998	(16)
19,258	25,712	144,031	23,728	758,789	(17)
6,525	100,414	100	(1,729)	726,133	(18)
9,088	72,868	696	88,922	669,943	(19)
9,183	14,033	750	(2,057)	131,312	(20)
321	11,502	165	24,317	109,295	(21)
32,109	**335,823**	**142,006**	**55,564**	**1,215,124**	**(22)**
2,950	55,423	92	10,846	185,143	(23)
7,054	63,037	134,550	4,697	301,341	(24)
11,946	112,890	5,916	14,286	299,675	(25)
1,063	20,651	42	5,510	138,573	(26)
4,115	37,293	1,406	6,381	94,664	(27)
4,981	46,529	0	13,844	195,728	(28)
16,667	**240,257**	**3,382**	**37,934**	**2,327,959**	**(29)**
3,163	45,609	921	8,073	948,295	(30)
1,256	91,290	1	7,734	408,908	(31)
1,017	37,718	529	20,281	680,540	(32)
11,231	65,640	1,931	1,846	290,216	(33)
47,809	**87,215**	**5,375**	**31,026**	**621,383**	**(34)**
7,098	26,263	533	11,468	214,623	(35)
28,142	40,084	3,309	13,600	252,062	(36)
7,340	17,162	1,498	5,025	106,796	(37)
2,471	1,880	6	342	24,193	(38)
2,758	1,826	29	591	23,709	(39)
34,403	**275,613**	**20,536**	**91,882**	**1,162,416**	**(40)**
18,927	151,574	10,838	59,567	389,594	(41)
11,974	32,239	2,882	9,465	248,082	(42)
3,502	91,800	6,816	22,850	524,740	(43)
20,823	**434,264**	**393,561**	**509,361**	**5,022,964**	**(44)**
3,935	12,383	0	19,079	197,912	(45)
76	79,307	81,893	101,853	1,325,208	(46)
7	21,586	22,313	34,996	189,027	(47)
16,805	320,988	289,355	353,433	3,310,817	(48)
17,195	**43,812**	**3,788**	**9,202**	**350,468**	**(49)**
10,196	10,741	3,770	7,085	183,969	(50)
258	5,449	18	516	36,242	(51)
6,038	15,955	0	427	90,413	(52)
703	11,667	0	1,174	39,844	(53)
63,655	**225,100**	**444,740**	**178,091**	**1,837,000**	**(54)**
168	681	0	14,996	115,040	(55)
63,487	224,419	444,740	117,586	1,578,289	(56)
0	0	0	761	32,505	(57)
0	0	0	44,748	111,166	(58)
10,230	**56,495**	**70**	**1,491**	**218,676**	**(59)**
287	487	0	143	34,646	(60)
565	18,124	0	967	64,929	(61)
9,378	37,884	70	381	119,101	(62)
2,527	**3,704**	**23,241**	**4,120**	**139,423**	**(63)**
2,252	3,704	23,241	3,998	136,189	(64)
275	0	0	122	3,234	(65)

1986
TOTAL COMMERCIAL AND INDUSTRIAL CONSUMPTION BY STANDARD INDUSTRIAL CLASSIFICATION

(Millions of Cubic Feet)[a]

		Region[b]			
Group	Description	1	2	3	4
01-09	Agriculture, Forestry & Fishing	342	3,196	260	8,785
10-14	Mining[c]	15	676	17	125
10-13	Mining[d]	1	1,132	3,348	3,554
15-17	Construction	644	5,954	265	2,616
20-39	Manufacturing[e]	3,830	31,681	3,231	17,001
20	Food & Kindred Products	2,117	52,237	29,139	70,642
21	Tobacco Manufacturers	76	2,606	1,996	91
22	Textile Mill Products	2,907	7,249	40,674	1,741
23	Apparel & Other Textile Products	193	3,604	9,457	776
24	Lumber & Wood Products	122	3,107	2,012	3,188
25	Furniture & Fixtures	185	1,928	1,108	3,668
26	Paper & Allied Products	2,030	39,612	43,784	40,642
27	Printing & Publishing	710	4,864	1,256	7,525
28	Chemicals & Allied Products	1,636	115,167	90,186	64,063
29	Petroleum & Coal Products	182	18,170	14,263	18,899
30	Rubber & Misc. Plastics Products	890	14,159	9,774	10,800
31	Leather & Leather Products	105	659	478	1,434
32	Stone, Clay, Glass & Concrete Products	2,956	93,266	59,832	32,472
331-332	Primary Iron & Steel	3,200	151,566	27,756	143,936
333-339	Primary Nonferrous Metals	477	55,239	14,659	32,564
34	Fabricated Metal Products	4,733	42,418	9,421	36,612
35	Machinery, except Electrical	4,505	18,438	3,171	31,948
36	Electric & Electronic Equipment	2,155	21,773	5,213	15,041
37	Transportation Equipment	960	27,932	6,551	36,593
38	Instruments & Related Products	1,012	4,132	611	1,701
39	Other Manufacturing	843	18,766	1,101	13,437
40-48	Transportation	1,817	13,654	2,128	8,654
49	Utility Services other Than Electric Generation	983	6,220	686	2,931
50-51	Wholesale Trade	2,221	15,176	1,646	13,113
52-57,59	Retail Trade	6,066	35,918	3,077	32,581
58	Restaurants and Drinking Places	6,985	27,308	13,359	24,339
60-64,66,67	Finance & Insurance	1,168	7,574	653	5,246
65	Real Estate (Apartments)	15,033	60,276	7,501	49,063
70	Hotels & Other Lodging Places	1,620	11,945	3,587	12,806
72-79	Services	4,721	39,233	5,416	47,781
80	Health Services, Hospitals	5,652	43,913	16,841	39,626
81,83,84	Legal & Social Services	528	4,918	1,822	9,518
82	Education (Schools)	5,470	50,217	13,771	64,916
86,88,89	Membership Organization & Misc. Services	2,023	25,072	1,901	19,468
91-97	Public Administration	2,929	28,503	10,481	17,380
99	Non-Classifiable	324	8,085	495	6,969
	Other Industrial[f]	2,599	14,465	1,960	9,399
	Not Classified by SIC or Unreported	41,804	294,708	254,194	268,236
	Total Commercial & Industrial	**138,769**	**1,426,716**	**719,081**	**1,231,880**

a. Btu content equals 1,000 Btu per cubic foot.
b. For region definition see previous table on page 208.
c. Commercial volumes classified as mining.
d. Industrial volumes classified as mining.
e. Commercial volumes classified as manufacturing.
f. Industrial volumes classified other than manufacturing or mining.

APPENDIX D

1986 (continued)
TOTAL COMMERCIAL AND INDUSTRIAL CONSUMPTION BY STANDARD INDUSTRIAL CLASSIFICATION

(Millions of Cubic Feet)[a]

Region[b]								
5	6	7	8	9	10	11	Total	Group
7,122	8,156	3,376	1,942	11,007	745	—	44,931	01–09
22	36	47	415	80	7	—	1,440	10–14
9,799	10,944	1,104	3,587	38,898	2,656	—	75,023	10–13
599	262	30	1,414	1,953	508	—	14,245	15–17
4,753	4,362	2,565	306	849	4,932	25	73,535	20–39
52,115	12,989	16,530	9,225	40,792	16,657	—	302,443	20
5	0	0	1	0	0	—	4,775	21
158	575	742	29	3,897	252	—	58,224	22
121	339	798	58	672	67	—	16,085	23
3,599	6,828	3,194	239	2,147	3,281	—	27,717	24
534	143	887	59	1,019	822	—	10,353	25
6,870	1,885	36,608	2,984	24,890	16,026	—	215,331	26
759	21,595	1,228	168	3,151	171	—	41,427	27
31,850	111,389	432,658	13,289	24,219	10,786	—	895,243	28
4,012	46,862	252,540	11,300	47,583	6,151	—	419,962	29
2,394	3,547	8,289	1,285	3,704	166	—	55,008	30
509	1,377	6	36	227	127	—	4,958	31
8,588	19,243	15,402	5,336	41,476	4,158	—	282,729	32
7,524	3,048	7,526	9,833	6,984	2,666	—	364,039	331–332
1,377	6,617	44,826	988	26,295	4,192	—	187,234	333–339
3,297	3,389	4,259	691	11,634	632	—	117,086	34
5,540	368	1,883	1,552	4,278	655	—	72,338	35
2,456	3,102	1,830	901	6,695	295	—	59,461	36
1,757	6,155	273	1,246	10,307	3,794	—	95,568	37
527	782	29	1,143	1,080	41	—	11,058	38
574	653	6,540	122	1,073	3,572	—	46,681	39
3,634	1,468	501	3,733	7,585	909	—	44,083	40–48
2,106	189	2,342	1,193	11,169	1,180	266	29,265	49
4,009	830	1,377	1,864	7,100	1,051	—	48,387	50–51
17,043	2,412	1,237	6,901	9,914	1,717	—	116,866	52–57,59
4,057	1,730	758	3,032	26,635	2,701	339	111,243	58
1,560	128	364	963	2,715	210	—	20,581	60–64,66,67
15,761	4,897	2,124	16,358	9,077	2,543	565	183,198	65
2,729	931	1,211	2,793	14,502	1,110	1,329	54,563	70
6,082	510	4,533	4,844	24,050	2,553	—	139,723	72–79
13,322	21,141	3,395	4,609	23,829	3,648	120	176,096	80
1,557	162	119	411	3,362	674	—	23,071	81,83,84
17,400	6,924	3,424	9,335	24,895	4,821	158	201,331	82
5,141	213	479	3,249	6,566	893	—	65,005	86,88,89
5,668	3,394	6,045	6,335	23,556	2,703	—	106,994	91–97
1,625	0	19	8,627	9,509	462	—	36,115	99
5,810	20,097	20,327	1,005	1,641	1,013	1,795	80,111	
82,981	219,025	1,621,566	40,824	94,196	47,212	79,239	3,043,985	
347,346	**558,697**	**2,512,991**	**184,225**	**615,211**	**158,759**	**83,836**	**7,977,511**	

UNITED STATES GAS CONSUMPTION BY CLASS OF SERVICE, 1975–1986

(Millions of Cubic Feet)[a]

	Firm				Interruptible						
Year	Residential	Commercial	Industrial	Electric Utilities	Commercial	Industrial	Electric Utilities	Other	Total Excluding Field Use	Field Use	Total Consumption
1975	4,981,448	2,415,713	5,116,697	2,025,981	271,223	1,935,675	1,024,480	1,173,759	18,944,976	1,426,000	20,370,976
1976	5,090,126	2,536,585	5,334,144	2,106,027	270,359	1,846,102	956,247	1,243,448	19,383,038	1,667,000	21,050,038
1977	4,909,373	2,463,206	5,019,752	2,017,471	222,735	1,651,440	998,913	1,167,724	18,450,614	1,694,000	20,144,614
1978	5,132,207	2,746,861	6,486,614	2,926,048	b	b	b	1,304,150	18,595,880	1,679,000	20,274,880
1979	5,144,003	2,770,674	6,973,202	3,274,967	b	b	b	1,233,424	19,396,270	1,530,000	20,926,270
1980	4,868,509	2,363,209	5,167,578	2,161,516	247,205	1,967,741	1,430,447	1,354,737	19,560,942	1,053,000	20,613,942
1981	4,654,258	2,240,388	5,026,609	2,142,754	249,760	2,001,333	1,632,357	1,350,019	19,297,478	953,000	20,250,478
1982	4,708,934	2,303,029	4,045,749	1,927,775	270,952	1,655,883	1,346,773	1,141,246	17,400,341	1,140,000	18,540,341
1983	4,429,538	2,179,757	3,763,706	1,721,185	258,656	1,903,910	1,294,767	1,180,978	16,732,497	1,009,000	17,741,497
1984	4,632,219	2,297,317	3,861,396	1,683,711	291,848	2,097,198	1,515,668	960,594	17,339,951	1,110,000	18,449,951
1985R	4,559,026	2,255,642	3,845,440	1,616,996	302,322	2,154,120	1,567,307	1,071,271	17,372,124	1,051,000	18,423,124
1986	4,427,780	2,190,161	3,414,110	1,623,445	324,072	2,049,168	1,238,241	1,112,099	16,379,076	972,000	17,351,076

a. Btu content equals 1,000 Btu per cubic foot.

b. In 1978 and 1979, firm and interruptible service were not measured individually; therefore all consumption is included under firm for each class of service.

R–Revised.

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